



Buckland Community Master Plan

Prepared for:

**The U.S. Army Corps of Engineers, Alaska District
and the City of Buckland**

Prepared by:

**Hanes & Moore
and Larsen Consulting Group**

The following seventeen values were defined by the Inupiat Iitqusiatic program, which was initiated in the early 1980s:

1. Respect for Elders
2. Hard Work
3. Hunter's Success
4. Humor
5. Respect for Nature
6. Family roles
7. Portrait of a People
8. Knowledge of Family Tree
9. Knowledge of Language
10. Love for Children
11. Respect for Others
12. Avoid Conflict
13. Cooperation
14. Sharing
15. Responsibility to Tribe
16. Humility
17. Spirituality

NUNATCHIAQ/BUCKLAND

BUCKLAND COMMUNITY MASTER PLAN

Prepared for:
U.S. Army Corps of Engineers
City of Buckland

Prepared by:
Dames & Moore
Larsen Consulting Group

July 1999

ACKNOWLEDGMENTS

Buckland City Council

Willie Thomas, Sr. – Mayor
Nathan Hadley, Sr. – Vice Mayor
Glenna Parrish – Secretary
Percy Ballot, Sr. – Treasurer
Arlene Armstrong
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Buckland IRA Council

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A Special Thanks to:

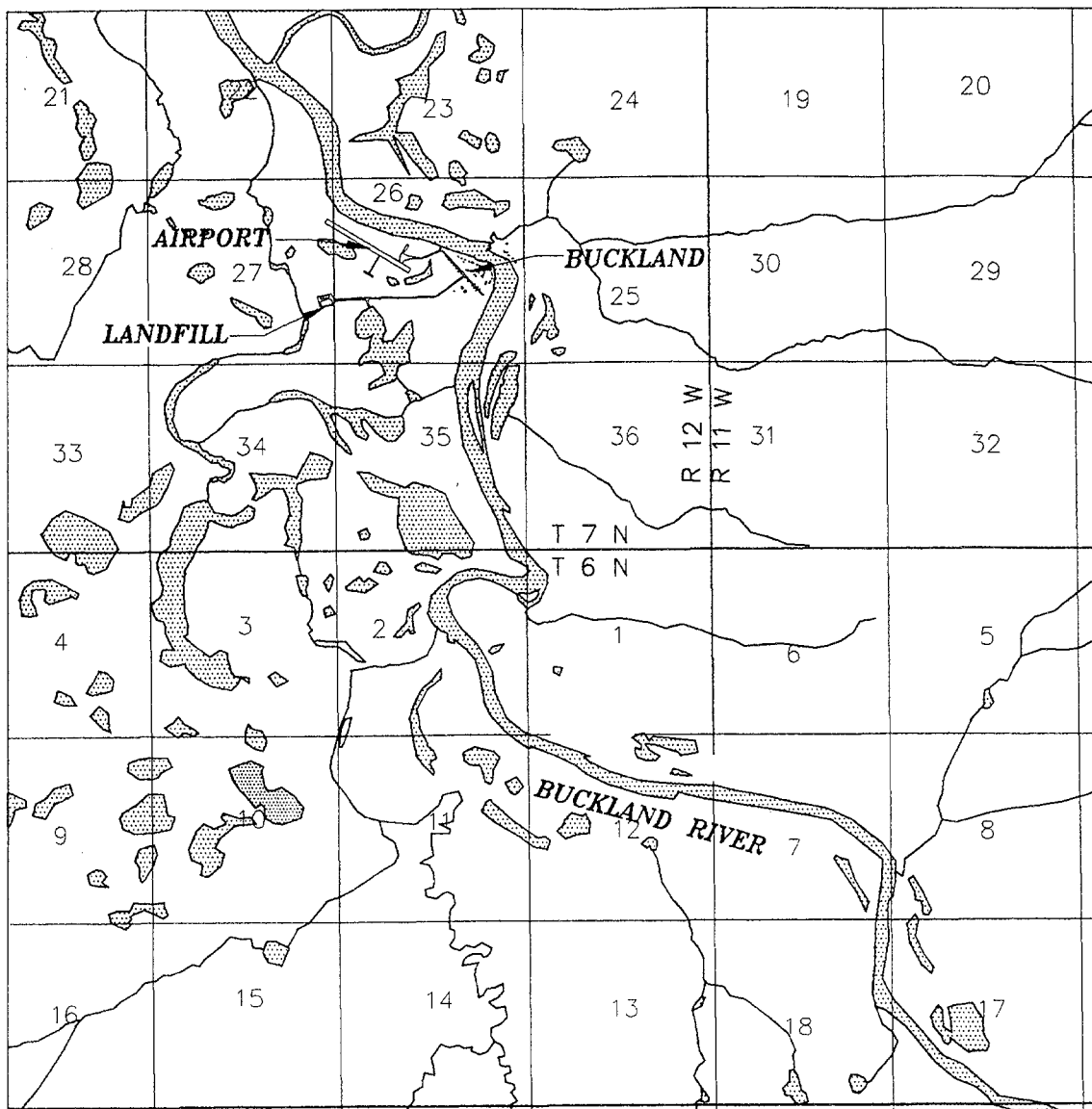
- Darlene Hadley, City Administrator
- Tina Swan, City Clerk
- Mona Washington, City Clerk
- Eddie Peters, Principal of Buckland Grade School and High School

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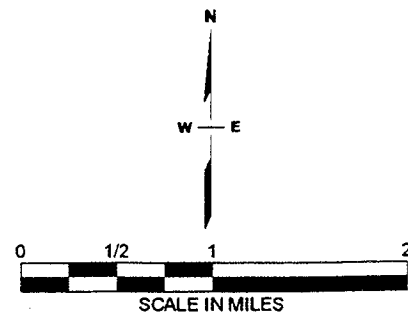
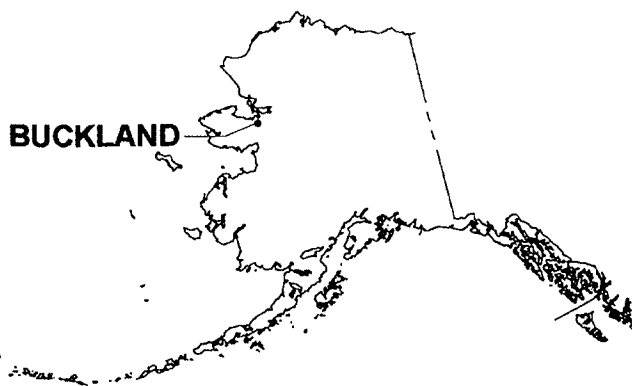
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VICINITY MAP

U.S.G.S. CANDLE (D-5)



CITY OF BUCKLAND COMMUNITY MASTER PLAN

VICINITY MAP

BUCKLAND, ALASKA

DAMES & MOORE



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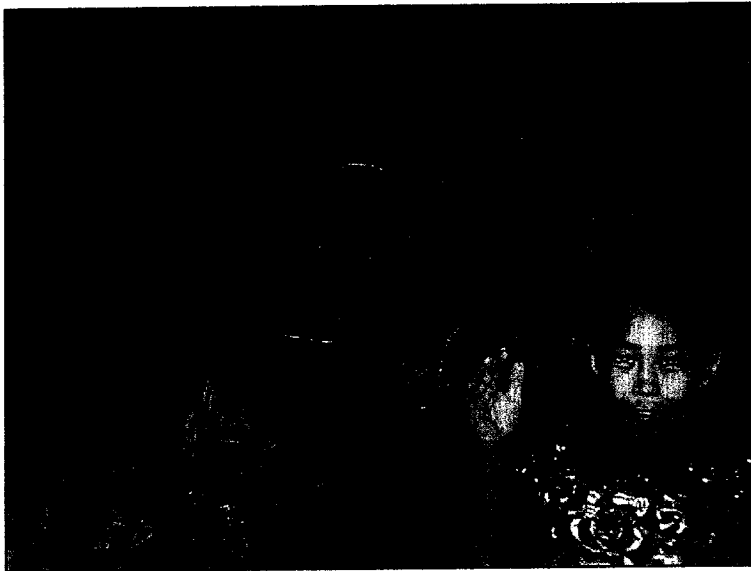
FIGURE 1-1

COMMUNITY PARTICIPATION

This Community Master Plan was prepared under the direction of the people of Buckland. The plan is the result of efforts by a number of partners:

- City of Buckland,
- Buckland Indian Reorganization Act (IRA) Council,
- Northwest Arctic Borough,
- Maniilaq Association,
- NANA Corporation,
- U.S. Army Corps of Engineers (Corps), and
- the Alaska Congressional Delegation, particularly Senator Ted Stevens.

These partners worked together to obtain the funds for the Environmental Infrastructure Project, of which this planning effort is a part. They provided support to the Community in developing the direction of this plan. Residents of Buckland also had significant participation, attending many public meetings and sharing their thoughts with planning team members in their homes. The result is a comprehensive assessment of the values and character of Buckland, its potential for growth, and recommendations for development of environmental infrastructure that is best able to meet the Community's current and future needs.



The primary purpose of this Community Master Plan is to provide guidance for future actions by the Community of Buckland. The plan also looks at existing community conditions and factors that affect water and sewer service demand. Economic development potential is assessed, because some activities require piped systems (in order to receive state and federal permits) and create specific water supply and sewage treatment demands. The plan addresses the potential for community growth and alternative locations for where that

growth is likely to occur (community expansion areas). The location of community expansion affects the design, capacity, and construction and operation costs of a water and sewer system. Similarly, these water and sewer system considerations should influence location choices for community expansion in order to develop cost-effective water and sewer systems.

However, the Community Master Plan should also be used as a long-range blueprint intended to guide other community goals and objectives:

- anticipate potential growth and forecast needs for housing, land, community facilities and services, and economic development
- provide guidance on how land use and facilities decisions can facilitate economic development
- present an opportunity for a community to assess how it is doing...identify strengths and values to preserve and on which to build; identify weaknesses and problems to address; and examine current trends affecting the community
- reach community agreement on priorities and direction for the future, (such as where growth should occur; what improvements are needed in roads, community facilities and utilities; and what types of economic development the community should encourage)
- develop strategies to accomplish community goals and objectives, and assign responsibility for acting on those strategies to the City, IRA, and other groups
- support grant applications and funding requests for items such as water and sewer, housing, businesses, and transportation facilities

By identifying specific strategies and implementation actions, the Community Master Plan will guide the Community and its partners in setting priorities for Buckland.

PLANNING PROCESS AND COMMUNITY PRIORITIES

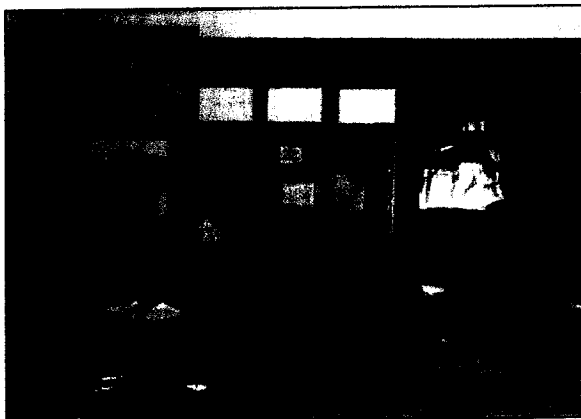
PROCESS USED TO PREPARE THE BUCKLAND COMMUNITY MASTER PLAN

The usefulness of this Master Plan—and ultimately its acceptability by the Community—rests on addressing the actual needs and desires of the residents of Buckland. The purpose of this plan is to serve as a foundation to help guide decisions by the Community and its partners on public policy and public investment over a 30-year period. It can effectively serve this purpose only if it truly reflects the vision, needs and values of the Community. The Community Master Plan should also build upon and reinforce past planning efforts. Both community and regional organizations have prepared recent plans that are reflected in this Master Plan. The public process used to work with the residents of Buckland and prepare the Community Master Plan is described in the following paragraphs.



A Town Meeting held in Buckland on August 6, 1998 as part of the Northwest Arctic Borough's Economic Empowerment Zone application. Approximately 75 village elders, adults, teenagers, and young school children participated in the meeting. The primary purpose of this meeting was to develop village priorities and update the status of village issues and needs. A village strengths, weaknesses, threats, and opportunities analysis was also conducted. While not specifically part of this planning effort, the results of this meeting have been incorporated in community priorities, and goals and objectives in the plan (see Appendix A).

A community visioning and values meeting was conducted by facilitators Linda Joule of Northwest Arctic Borough and Selina Moose of NANA Corporation in conjunction with the U.S. Army Corps of Engineers (the Corps), in October of 1998. The meeting was essentially a way to generate ideas and to determine topics that were of concern in the Community. The findings of the event helped to frame the topics addressed by the Master Plan, and have been used to develop Master Plan Goals and Objectives (see Appendix B).



The next community meeting, held in November of 1998, was designed to introduce the residents of Buckland to the team involved in developing Buckland's Utility Facilities Plan and Community Master Plan (planning team). Team members from the Corps, Larsen Consulting Group, and Dames and Moore were introduced, and Buckland residents were given the opportunity to ask questions. Residents were invited to express concerns and opinions relating to future needs and opportunities for the Community of Buckland. In

addition to interviewing those residents who came to the open house, the planning team sought out members of the Community who were suggested as being knowledgeable or concerned about particular issues related to topics addressed in the Master Plan.

Coincident with the November community meeting, city and borough officials organized several meetings between the members of the planning team and community stakeholders (especially representatives of local Native organizations). Meetings were held with representatives from the Northwest Arctic Borough, NANA Regional Corporation, Maniilaq Association, Buckland City Council and people working for the City of Buckland, Buckland IRA, and members of the local business community. The IRA provided a copy of the Buckland IRA Council Comprehensive Plan, dated December 1994. The Northwest Arctic Borough and Maniilaq Association also provided information that was helpful in preparing the Master Plan.

The planning process helps identify future community needs. One of the requirements that the Community of Buckland identified was to determine areas for community expansion. Community meetings were held on February 4th and 5th to identify expansion options for the Community of Buckland. On February 22nd, 23rd, and 24th, 1999, an informal house to house visit was made by two of the planning team members to exchange information with people about conditions that affect the options for water and sewer. The goal of the community meetings and the house to house visits were to inform the community residents about the Utility Facilities Plan and the Community Master Plan, as well as exchange information about alternatives for community expansion.

In March 1999, the planning team conducted a resident survey of water/sewer-use characteristics. For the water/sewer survey, city staff visited all water and sewer customers in order to document their service connections and facilities. The surveys were designed to gauge levels of community concern and support related to a variety of environmental infrastructure topics. Results of the survey helped to determine the priorities and recommendations contained in the Plan. Appendix C contains a summary of the results of the 1999 Buckland Community Survey.

Finally, the Community responded to the draft elements of the Master Plan during a series of community meetings in 1998 and 1999. These events included a formal presentation of the plan elements at an open community meeting on March 31 and April 1, 1999. The planning team visited Buckland over these two days, meeting with local and state officials, as well as informally with many residents of the Community. Information gathered during this visit provided an informed basis for making final revisions to the plan document.

COMMUNITY PRIORITIES, VALUES, AND PREFERENCES

The following 10 new village priorities were developed by residents of Buckland during the August 6, 1998 Town Meeting:

1. New Health Clinic
2. Fire Station
3. More Housing

4. New Bridge Across the Buckland River to the Old Town Site
5. More Jobs for Residents (including education, training, licensing, and certification)
6. Community Playground
7. Bigger Laundromat
8. Day Care Center
9. Low Rent Apartments
10. Teen Center

During the Values and Guidelines Meeting held on October 29, 1998, the participants developed values for the following categories, which have been incorporated into Master Plan Goals and Objectives:

- Community Values
- Individual Based Values
- Children & Education
- Economic Values

The participants also identified a vision for community improvement, including what they would like to see in their house, outside their house (yard), in their neighborhood, and in their Community (see Appendix B).

3.0 BUCKLAND MASTER PLAN GOALS & OBJECTIVES

The following goals, objectives, and action items have been developed from a number of sources. First, they include goals and values identified by the Community during town and community meetings. Second, they include goals and objectives from the Buckland IRA Comprehensive Plan. Third, they include items raised by the Community in meetings and individual conversations as part of the process of preparing this Master Plan. Finally, they come from observations and analysis by planning team members. The source of community based goals and objectives are shown as follows:

- * – items incorporated from 10/29/98 Buckland Community Meeting
- ** – items incorporated from 8/6/98 Buckland Town Meeting
- *** – items incorporated from Buckland IRA Comprehensive Plan

Action items have been developed as measures to implement the Master Plan. Not all of the goals and objectives have action items; some action items are more appropriate for the City and cooperative partners to develop as a means of ongoing plan implementation.

COMMUNITY DEVELOPMENT PRINCIPLES *

- ◆ Build and maintain trust
- ◆ Inform the Community about new ideas and projects, and provide opportunities for the Community to get involved
- ◆ Incorporate community values into the planning process
- ◆ Involve all community groups into the planning effort
- ◆ Help people express their ideas, and be creative and open to new ideas
- ◆ Take advantage of a partnership between the City of Buckland, Buckland IRA, Northwest Arctic Borough, NANA Corporation, Northwest Arctic School District, and Maniilaq

COMMUNITY VALUES*

GOAL: Show respect for elders and their value to the Community*

Objective: *Incorporate the knowledge of elders into the Community Master Plan*

Action – Review the plan with elders and ask for their advice and opinions on issues such as flooding, erosion, and community expansion

Objective: *Incorporate the knowledge of elders into school programs*

Action – Work with the Northwest Arctic school district to have elders participate in classroom education to teach traditional skills and values

GOAL: Value the land, the Buckland River, marine waters, and the fish, wildlife and plants that they support*

Objective: *Improve the disposal of sewage and solid waste*

Action – Support and implement the Buckland Environmental Infrastructure Project

Action – Upgrade the garbage disposal dumpsters to closed, wildlife-proof containers

Objective: *Maintain a clean environment*

Action – Provide education on preventing fuel spills of any size

Action – Develop a waste oil disposal program

Action – Ensure that trash disposal boxes are used and emptied on a regular basis

GOAL: Maintain a safe Community*

Objective: *Utilize existing education programs or implement new programs on topics such as drug and alcohol abuse, safe motor vehicle and boat operation, and parenting skills*

Action – Continuing supporting school district programs on and alcohol abuse, safe motor vehicle and boat operation, and parenting skills

Action – Work with Maniilaq Association to identify and introduce substance abuse, motor vehicle safety, and parenting education programs through the Buckland Health Clinic

Objective: *Develop, post, and enforce village speed limits for motor driven vehicles*

Action – City of Buckland and Buckland IRA will identify locations for posting village speed limits, prepare signs and post them

Objective: *Install street lights**

Action – Investigate sources of state and federal funds for installing and operating street lights

Objective: *Maintain a dry Community***

Action – Continue youth and adult education on problems associated with alcoholism

Objective: *Improve dog control methods****

Action – Develop a City animal control program that educates dog owners on the hazards of letting dogs run loose, and establishes fines for loose dogs

GOAL: Maintain a clean and healthy Community*

Objective: *Improve the disposal of sewage and solid waste*

Action – Support and implement the Buckland Environmental Infrastructure Project

Objective: *Develop a new year-around water supply*
Action – Support and implement the Buckland Environmental Infrastructure Project

Objective: *Compile an accurate report of health problems in Buckland to assist with obtaining funds for environmental infrastructure improvements*
Action – Work with Maniilaq Association in compiling statistics on health problems and needs

GOAL: Maintain a Community that cares for raising children*

Objective: *Develop programs and activities of interest to young adults and keep them productively occupied*
Action – Investigate sources of funding to develop a teen center in an existing or new building **

Objective: *Develop programs and activities for younger children*
Action – Identify a safe location for a playground and investigate funding sources**
Action – Investigate sources of funding to develop a day care center in an existing or new building **
Action – Investigate sources of funding to develop a Head Start program in an existing or new building **

Objective *Teach children right from wrong**
Action – Support parenting education programs through the school district and Buckland Health Clinic

Objective: *Encourage students to seek higher education**
Action – Work with the Northwest Arctic School District and NANA Corporation to support and fund students seeking higher education

Objective *Support the teachers and aides in the school**
Action – Find ways for the Community to show appreciation of teachers and school aides

Objective *Involve children in subsistence activities and with elders*
Action – To be determined by the City of Buckland and Buckland IRA

ECONOMIC DEVELOPMENT

GOAL: Protect and increase local employment opportunities **

Objective: *Require local hire on community projects*

Action – Ensure that an acceptable level of local hire is required on projects funded by the IRA Council, City of Buckland, and Northwest Arctic Borough

Action – Assemble and maintain a City of Buckland list of the local labor pool and job skills

Action – Develop a local hire plan for construction and operation of the sewer/water project

Objective: *Provide additional employment training to Buckland Residents*

Action – Provide training prior to and during employment

Action – Work with regional organizations to identify and participate in employment training opportunities

Objective: *Maintain participation in federal and state fire fighting programs **

Objective: *Maintain the use of shareholder employment on NANA Corporation development projects*

Action – Provide City of Buckland list of the local labor pool and job skills to NANA Corporation

GOAL: Promote/seek economic development and diversification**

Objective: *Complete the food processing and crafts facility*

Action – Upgrade water and sewer systems to support the facility

Action – Obtain necessary federal and state permits for facility operations

Action – Re-evaluate potential markets and distribution of processed Native berry and game products

Objective: *Develop a tourism program and support facilities that are acceptable to and hires local community residents*

Action – Initiate community discussions on types of tourism and use areas that are acceptable to village residents, particularly related to guided hunting and fishing and to cultural tourism

Objective: *Develop lodging and restaurant facilities that can serve visitors to the community*

Action – Initiate community discussions to determine whether this activity is best done by the IRA, a private individual, or other party, and then support facility development

Action – Determine the financial feasibility of such facilities by preparing an accurate estimate of potential demand, based on estimates of the annual number of work-related and casual visitors to Buckland

Objective: *Develop taxi services in town**

Action – Initiate community discussions to determine whether this activity is best done by the IRA, a private individual, or other party, and then support service development

GOAL: Develop community facilities and infrastructure that support economic development

Objective: *Construct community rental freezers**

Action – Work with NANA Corporation and the Northwest Arctic Borough to determine the need, capital, and operating costs for constructing freezers

Objective: *Use the corporation gravel supply to reduce costs for community and infrastructure development*

Action – Identify potential needs for gravel in the Community and work with NANA Corporation to make gravel available

GOAL: Enhance the existing business and economic environment from within the Community and in partnership with regional organizations to create a diversified economy that creates quality employment opportunities for current residents and future generations, and reduces dependency on state and federal programs

HEALTH AND SOCIAL SERVICES

GOAL: Improve community health services

Objective: *Build a new community health clinic and expand the services provided ***

Action – Work with Maniilaq Association to obtain funds for building a new health clinic

Objective: *Develop a database on community health and social service needs*

Action – Work with Maniilaq Association to develop database of community health problems and health and social service needs

HOUSING

GOAL: Provide an adequate housing supply for community residents**

Objective: *Estimate housing needs over the next 30 years*

Action – Use the master planning process to calculate population growth and associated housing needs

Objective: *Work with NANA Corporation and other landowners to identify suitable lands and locations for new housing and community expansion*

Action – Coordinate City of Buckland ANCSA 14(c)3 land selections for community expansion opportunities

Objective: *Evaluate public and private funding options for development of new housing*
Action – Work with regional and statewide organizations to evaluate opportunities for use of NAHASDA, AHFC, and bank loan funds
Action – Develop a community housing plan

Objective: *Evaluate the feasibility of building multi-family housing*
Action – Work with regional and statewide organizations to evaluate opportunities for use of NAHASDA, AHFC, and bank loan funds

Objective: *Evaluate the feasibility of building elders housing*
Action – Work with regional and statewide organizations to evaluate opportunities for use of NAHASDA, AHFC, and bank loan funds

GOAL: Locate new housing in manner that avoids transportation and natural hazard problems

Objective: *Locate houses with an adequate setback from property lines and rights-of-way*

Objective: *Locate housing away from areas with erosion, flooding, and permafrost problems*

GOAL: Provide accurate surveys of lots and structures

Objective: *Correct existing survey problems and inaccuracies*

Objective: *Avoid future survey problems and inaccuracies*

GOAL: Improve the quality of new housing development*

Objective: *Improve the design and features provided in new housing*

Objective: *Improve yard design and features provided outside new housing*

TRANSPORTATION

GOAL: Provide transportation access to developable lands for community expansion and relocation of structures endangered by flooding and erosion

Objective: *Identify requirements and costs of access to developable sites that are out of erosion and flooding areas*
Action – Identify specific facilities and develop comparative cost estimates

Objective: *Identify potential sources of funding that can be used for designing and constructing access to developable sites*

GOAL: Construct and maintain roads in a manner that minimizes dust and flooding problems*

Objective: Reduce community dust levels through techniques to construct and surface-treat roads

Objective: Locate and construct roads to avoid aggravating flooding problems

GOAL: Improve community transportation services

Objective: Provide transportation services for elders

Objective: Develop a community boat storage area

NATURAL HAZARDS

GOAL: Reduce the threat of erosion to property owners, residents, and public facilities in Buckland

Objective: Seek funding for erosion studies and control measures on the banks of the Buckland River

Objective: Take actions to protect structures most at risk from erosion damage

Objective: Develop new facilities away from areas subject to erosion

GOAL: Reduce the threat of flooding to property owners, residents, and public facilities in Buckland

Objective: Seek funding for flood studies and control measures on the banks of the Buckland River

Objective: Take actions to protect structures most at risk from flood damage

Objective: Develop new facilities away from areas subject to flooding

COMMUNITY FACILITIES AND UTILITIES

GOAL: Improve laundromat services**

Objective: Expand the existing laundromat facility

GOAL: Improve electrical generation and distribution services**

*Objective: Upgrade existing and future electric distribution lines**

Objective: Ensure that backup generation facilities are adequate and well-maintained

Objective: Investigate feasibility of developing alternative power generation, including hydroelectric, wind, and use of waste heat

GOAL: Consolidate fuel purchase and storage facilities

Objective: Build a consolidated bulk storage fuel facility

Action – Coordinate with the Buckland IRA, City of Buckland, Northwest Arctic School District, and NANA Corporation to develop a consolidated bulk fuel facility

Objective: Work with the Buckland IRA, City of Buckland, and Northwest Arctic School District to consolidate fuel purchases and save money

GOAL: Improve village fire-fighting capabilities

*Objective: Build or renovate a building to serve as a fire station***

Objective: Provide piped water and fire hydrants

Objective: Provide adequate water storage for fire fighting

LAND USE AND MANAGEMENT

GOAL: Maintain cooperation on land management between the City of Buckland, the Buckland IRA, and NANA Corporation***

Objective: Complete ANCSA 14c3 municipal land selections in a manner that facilitates housing construction and community expansion

Objective: Protect Native ownership of traditional Native lands, traditional use of those lands, and cultural resources

Objective: Use Native lands to facilitate community expansion and economic development in a manner that benefits the Community of Buckland

GOAL: Transfer land use decisions to the community

Objective: *Establish a Buckland Planning Commission that includes representatives of the IRA*

GOAL: Ensure that lands exist in appropriate locations to meet existing and future land use needs of the Community while: 1) allowing sufficient space to accommodate all necessary and desirable land uses, 2) promoting orderly and quality growth, and 3) providing a safe location for community expansion and development of environmental infrastructure

BUILDING PARTNERSHIPS

GOAL: Maintain traditional partnerships with local, state and federal groups

Objective: *Maintain the strong partnership between the City of Buckland and the Buckland IRA*
Action – Continue joint IRA and City Council Meetings

Objective: *Use a Buckland Planning Commission to provide local recommendations to the Borough on planning and land use decisions*

Objective: *Work with Maniilaq Association to maintain health and social services*

GOAL: Develop community priorities on an annual basis and share them with the appropriate partners

Objective: *Hold a joint annual meeting with the IRA and City to set community priorities for the year*

Objective: *Share the annual community priorities with the appropriate local, state, and federal partner*

IMPLEMENTATION OF THE COMMUNITY MASTER PLAN

GOAL: Implement the Buckland Community Master Plan by showing how the plan can be used, and by identifying specific actions to be taken, who is going to do it, and when it should be done

Objective: *Use the Master Plan as a guide in making decisions, not as a mandatory course of action*

Objective: *Take responsibility for planning implementation*

4.0 BACKGROUND

PHYSICAL SETTING AND ENVIRONMENT

The City of Buckland is an Inupiaq Eskimo village that is located along the banks of the Buckland River. Buckland is approximately 75 miles southeast of Kotzebue, and is one of 11 communities within the Northwest Arctic Borough. The city encompasses 1 sq. mile of land and water.

Buckland is located approximately 30 miles up the Buckland River from the mouth of Eschsholtz Bay, which opens into Kotzebue Bay. The current town site is located at 65° 59' N latitude and 161° 08' W longitude. The area bordering the Buckland River is covered by wet tundra vegetation. Buckland is a community that is strongly connected to the river. Historic camps and settlements have been located on the Buckland River in at least three different places at least five different times in recent history. The previous sites are known as Elephant Point, Old Buckland, and New Site.

Transportation and subsistence activities historically have and still depend on the river. The most recent old town site was located on the other side of the river from the Community's present location. The location of present day Buckland provides more shelter from the wind than did the coastal camps, but still provides easy access to Kotzebue Sound for hunting beluga whale and seal. The sale or importation of alcohol is banned in the Community.

Buckland is located within the floodplain of the Buckland River, and has experienced flooding in certain years during the breakup of the river. Flooding can cause damage from inundation by flood waters, and damage from ice floes that float down river on flood waters. Some parts of the Community are subject to riverbank erosion and resulting property damage, particularly the (west) bank of the river, upstream of the Community.

Buckland is located in the transitional climate zone, which is characterized by relatively short, cool summers and long, cold winters, as well as large temperature differences between the seasons. During June, when the sun is above the horizon for 18 to 21 hours per day, the temperature regularly reaches 70 and occasionally 85 degrees F. By contrast, the winter months have regular temperatures of -30 and occasionally reach -60 degrees F. Ice fog can form during periods of extreme cold and significantly reduce visibility. Average annual precipitation is 9 inches with snowfall averaging 40 inches. The Buckland River is frozen from October to May each year.

PLANNING IMPLICATIONS

The physical setting, environment and climate characteristics of the Buckland area affect planning for the Community in several ways.

- The location and nature of wetlands, and permafrost and ice rich soils have a significant effect on where houses and public facilities, such as water and sewer systems can be

built. They are a factor in the cost of development and in locating suitable areas for community expansion. This information is used later in the Master Plan in determining the suitability of areas for future development.

- Flooding and riverbank erosion can threaten existing houses, buildings, and transportation facilities. This information also is used in determining suitability of community expansion areas.
- Climate influences design, construction and location of housing, public facilities, and utilities. Climate considerations are discussed in various elements herein, as well as the companion document to the Community Master Plan, Larsen Consulting Group's Utility Facilities Plan.

PEOPLE AND HISTORY

Buckland is a community shaped by the traditions of its people and their history. Buckland is located in the traditional territory of the Northwest Arctic Inupiaq Eskimos, who have lived in the area for thousands of years. Archaeological exploration has discovered fossils at Elephant Point that indicate prehistoric occupation of the area. Traditionally, the Inupiaq Eskimos established spring, summer and winter camps, and moved between the camps with the migration and availability of fish and wildlife on which they depended for survival. That reliance continues today with subsistence use of a variety of species.

The Bureau of Indian Affairs helped the village of Buckland establish a reindeer herd in the early 1900s. Since the 1920s, the Community has moved at least five times, first, from Old Buckland, which is one mile down river of the present site. Second, in search of fuel and pasture the village moved 30 miles upstream on the river's south fork. Third, they moved to Elephant Point for reliable transportation, but this site lacked a fuel supply. Fourth, they moved to the left*, or north, side of the river where the cemetery is now located (*a river's side can be determined by facing upriver). Finally, they moved across the river to the present site. From conversations with Buckland residents it is thought there were a number of reasons for the move, for example beach access for boats. But the only recorded reference to the move appears to be a 1968 Corps of Engineers flood report that cites an elderly woman as saying that the Community moved, in 1952, to the low side of the river because that was where the power plant had been installed.

Buckland is classified as a second class city, and was incorporated in 1966. The seven-member City Council governs Buckland, and elects the Mayor. The local government and organizations that influence Buckland's social, cultural and economic activities include the Buckland IRA Council, the Northwest Arctic Borough, NANA Regional Corporation, Maniilaq Association, and the Northwest Arctic School District. For a description of these organizations, see the Cooperative Partners section.

Subsistence contributes significantly to the culture and economy of Buckland, and it is an important consideration in planning for the Community. Subsistence activities and consumption, through sharing of resources, is practiced by the majority of Buckland residents. The most

important food resources harvested by Buckland residents are caribou and sea animals, including beluga whale and seal. Subsistence activities follow a season cycle of activities:

- Spring normally includes a variety of hunting and trapping activities, including harvest of muskrat, beaver, or other fur bearer's and waterfowl. Ice fishing will occur before spring breakup.
- Summer activities focus on harvest of salmon and other species of fish, as well as beluga whale. Berries, especially blueberries are also harvested.
- Fall is the season for hunting caribou and other big game. Bear and moose are taken when available, and waterfowl are taken during their southern migration through the area.
- Winter is devoted to hunting seal along the coast, ice fishing on the Buckland River, and small game hunting.

Historically, Buckland residents supplemented the local economy by managing a herd of more than 2,000 reindeer; workers were paid in meat. One Buckland resident still holds permits for raising reindeer, but stopped the practice after migrating herds of caribou absorbed his herd.

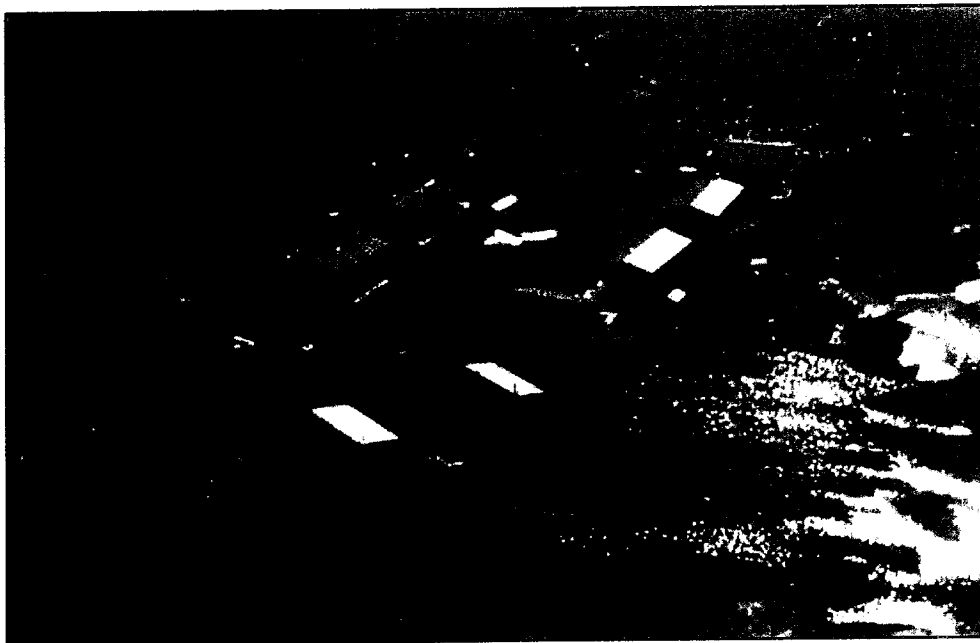


FLOODING

The City of Buckland is located on the inside of a river bend, within the floodplain, of the Buckland River. The river frequently floods Buckland, primarily during the two weeks surrounding spring break up. Buckland relocated to the right (south) bank of the Buckland River in 1952, so there are only 46 years of flood record at the present site. The prior village site was just across the river from the present site, but was not subject to flooding (see Figure 5-1, Flood Map).

The Corps of Engineers estimated the Base Flood Elevation (BFE), or 100-year flood, based on the 1987 and 1971 floods and anecdotal information on lesser floods obtained from residents of Buckland. The Community floods often, about one in every three years. Most of the floods are disruptive to Buckland residents, but are not severe. The floods of 1971 and 1987, however, were significant, considerably higher than most other flood events. The 1987 flood is the highest flood of record. The 1971 flood was approximately the same elevation, but no detailed elevation information is available. All significant floods are ice jam floods.

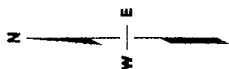
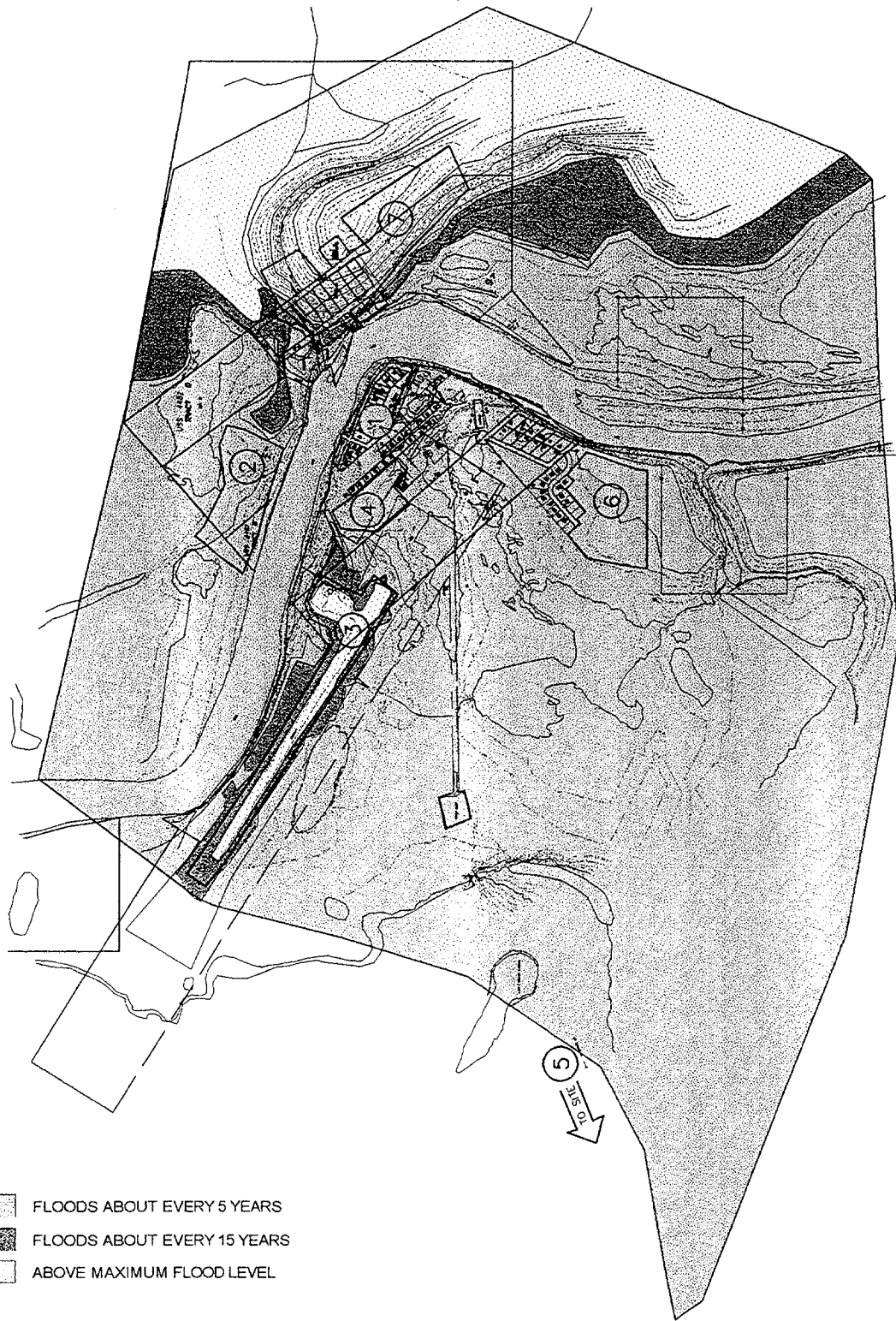
The elevation of the May 21-23, 1987 flood was determined by the Corps from floodwater marks left on the community hall and on the Jimmy Geary Sr. house. According to the 1998 Larsen Consulting Group (LCG) survey, the general ground elevation at the community hall is 90 feet. The watermark on the community hall is approximately 3 feet above the ground, which would make the 1987 flood elevation about 93 feet. The ground elevation at the Geary house is 88.80 feet. The watermark on the house is about 4.5 feet above ground, which would make the 1987 flood elevation about 93.3 feet. Because neither site is exact, a 93-foot elevation was selected as the elevation of the 1987 flood. The flood was caused by an ice jam, therefore the flood water elevation in the pool behind the dam would have been relatively constant throughout the village; accordingly, the 93-foot elevation would suffice for the flood elevation for the entire village.



According to the Corps, because of the short period of record, and because there were two significant floods of about the same elevation during that period, it is unreasonable to assume a reoccurrence interval for the 1987 flood. However, it is most likely that neither flood was a 100-year event. Because of this uncertainty, the 100-year flood must be assumed higher than the 1987 flood. At the same time, the maximum flood elevation is somewhat limited in expected elevation because of the broad flood plain surrounding the village and the location of the ice jam. Based on these factors, the Corps recommends adding a one-foot safety factor to the 1987 flood level for a recommended building finish floor elevation of 94 feet.

RIVERBANK EROSION

Planning for erosion is important for the development of facilities and long-term planning for growth. Anticipated erosion in an area precludes spending many types of public funds for developing improvements in that area. Erosion limits should not be applied without proper application of engineering principles and prudence. The condemnation of a site for future development, due to anticipated erosion must have sufficient cause. In the case of Buckland, anticipated erosion was determined in an erosion and flooding study completed by the U.S. Army Corps of Engineers.



| | | | |
|---|---------------|--------|--|
| CITY OF BUCKLAND COMMUNITY MASTER PLAN | | | DAMES & MOORE GROUP |
| FLOOD MAP AND POSSIBLE COMMUNITY EXPANSION | | | |
| SITES 1-7 BUCKLAND, ALASKA | | | |
| JOB NO. | 41932-001-220 | DRAWN: | ELK |
| DATE: | JULY 1999 | FILE: | FIG05-1.DWG |

FIGURE 5-1

According to the Corps, the rate of erosion at a point can accelerate and decelerate depending on local conditions, and position of adjacent turbulence. Long-term total erosion is usually best calculated from previous experience of erosion. This approach defines an average erosion rate. Actual rates will probably greatly exceed this rate in some years, and be much less in other years. However, the long-term total erosion expected for a period will be close to the sum of years multiplied by the erosion rate. This rate should not be used to define short-term hazards, as it is possible for 10-years worth of erosion to occur in one season at a given location. Long-term historical rates are used to predict anticipated long-term future erosion rates (see Figure 5-2, Erosion Map).

The Corps erosion predictions are based on three interrelated items. The first is the photographic evidence of erosion on a historical basis. The second is the verification of erosion by records. In the case of Buckland, this includes the historical survey from marker to the riverbank, and the resurvey of that same line to the eroded riverbank. The third concern is consistency with erosion found on other rivers or similar situations.

The Corps reported that the west bank of the Buckland River along and upstream of Block 2, Tract A, US Survey 4482 is expected to erode at average rates of 3.5 to 5.0 feet per year. The cut bank is expected to progress downstream at an average rate of 13 feet per year until current rotation from the opposite downstream bank starts to reduce the force against the west bank. Next, the downstream progress of the cut bank will slow. This erosion will change the direction of the current against the far (east) bank downstream. This will initiate or increase erosion on that side. However, the aerial photography indicates that erosion on that side has historically been limited in extent. Apparent hard formations along the foot of the hill have stopped erosion at that point in the past. The point of land just upstream of Koobuk Creek shows no erosion, and local knowledge verifies the presence of large rock in that area. Erosion of the east bank is expected to stay above that point and be limited to the low-lying land. This reconfiguration of the bend may increase the erosion along the beachfront of Tract C, US Survey 4482. There has been some erosion there in the past 30 years, but it is not consistent. The Corps has issued a warning to avoid unprotected infrastructure development on the riverside of Cherly Avenue. The top of the bank is receding towards the road and threatens the post office and adjacent subdivision. The top of the bank has moved inland approximately 140 feet since 1972. It is estimated that the erosion in 30 years will impact several homes and undermine the road accessing the subdivisions south of town.

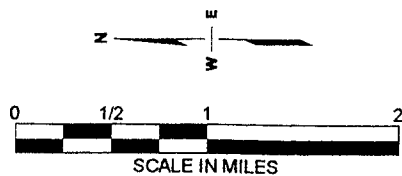
SEISMIC ACTIVITY

The seismic zone classification for Buckland is 2B, indicating that predicted damage from earthquakes is moderate. Earthquakes of magnitude 5.5 are possible in the area, and critical structures must be designed to resist damage from these forces.

SOIL CONDITIONS

The soils information comes from Larsen Consulting Group's Buckland Utility Facilities Plan. The topography in and around Buckland consists of low rolling plains cut by streams and numerous lakes. The area is generally underlain by continuous permafrost. This contributes to

extensive surface water during the summer months caused by water held on the surface by impermeable permafrost. Aerial photographs reveal polygonal patterns in the ground surface in the areas south of town. This suggests soils ribboned with ice wedges underlain with shallow permafrost. Existing geotechnical information in the area is limited.



| | | | | |
|--|---------------|--------|--|-------------------|
| CITY OF BUCKLAND COMMUNITY MASTER PLAN | | | | |
| EROSION MAP AND POSSIBLE COMMUNITY EXPANSION SITES 1-7 BUCKLAND, ALASKA | | | DAMES & MOORE GROUP | |
| JOB NO: | 41932-001-220 | DRAWN: | | ELK |
| DATE: | JULY 1999 | FILE: | FIG05-2.DWG | FIGURE 5-2 |

6.0 POPULATION

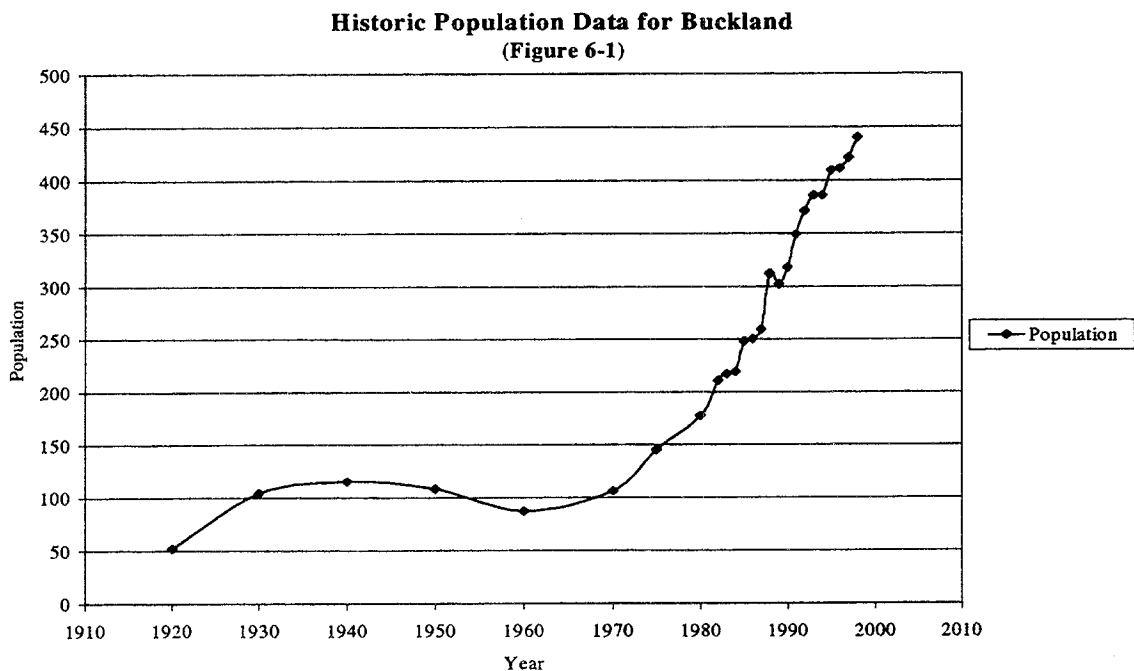
A primary purpose of the Community Master Plan is to provide guidance for future actions by the Community of Buckland. This section presents a series of population potential forecasts, which should help Buckland accomplish the following:

- Provide a basis for anticipating change in Buckland
- Address potential changes in population and social characteristics
- Provide information that will help assist in developing appropriate short-term, medium-term, and long-term actions

The population projections include Low Scenario, Middle Scenario or Best Estimate, and High Scenario. These forecasts are an educated guess of future events that can have an affect on the Community of Buckland. Because conditions can change dramatically over a short period of time, the forecast should be reviewed and updated periodically.

POPULATION DATA

The population of Buckland was first recorded in the 1920 census at 52 residents (see Figure 6-1 below). In 1998, Buckland had a population of approximately 440. The population of Buckland is predominantly Alaskan Native (95 percent), and relatively young (approximately 52 percent of the population are under the age of 18). The male and female composition is approximately 55 and 45 percent, respectively.



POPULATION PROJECTIONS

The following figure (6-2) shows low, middle, and high population forecasts for Buckland over a 30-year period through 2030 (see Figure 6-3 for a graphic representation). The Middle Scenario, or Best Estimate, was derived by projecting the data into the future at a growth rate of 3.5 percent. This Middle Scenario falls in between the Low and High Scenarios, which assumed 2.5 percent and 4.5 percent growth rates, respectively. All forecasts are based on the constant rate of growth, which is based on recent population data. The 3.5 percent growth rate was derived from the years 1988-1998. This particular 10-year period was used for two reasons. First, the data before 1988 fluctuated without a clear pattern; second, when dealing with small population numbers the addition or subtraction of a small number of people (for example one family) can radically affect the estimated growth rate, particularly if the growth rate is already small. For purposes of comparison, the Northwest Arctic School District also projected expected growth for the area at 3.5 percent.

Population Estimates for Growth Rates of 2.5, 3.5, and 4.5 Percent*
(Figure 6-2)

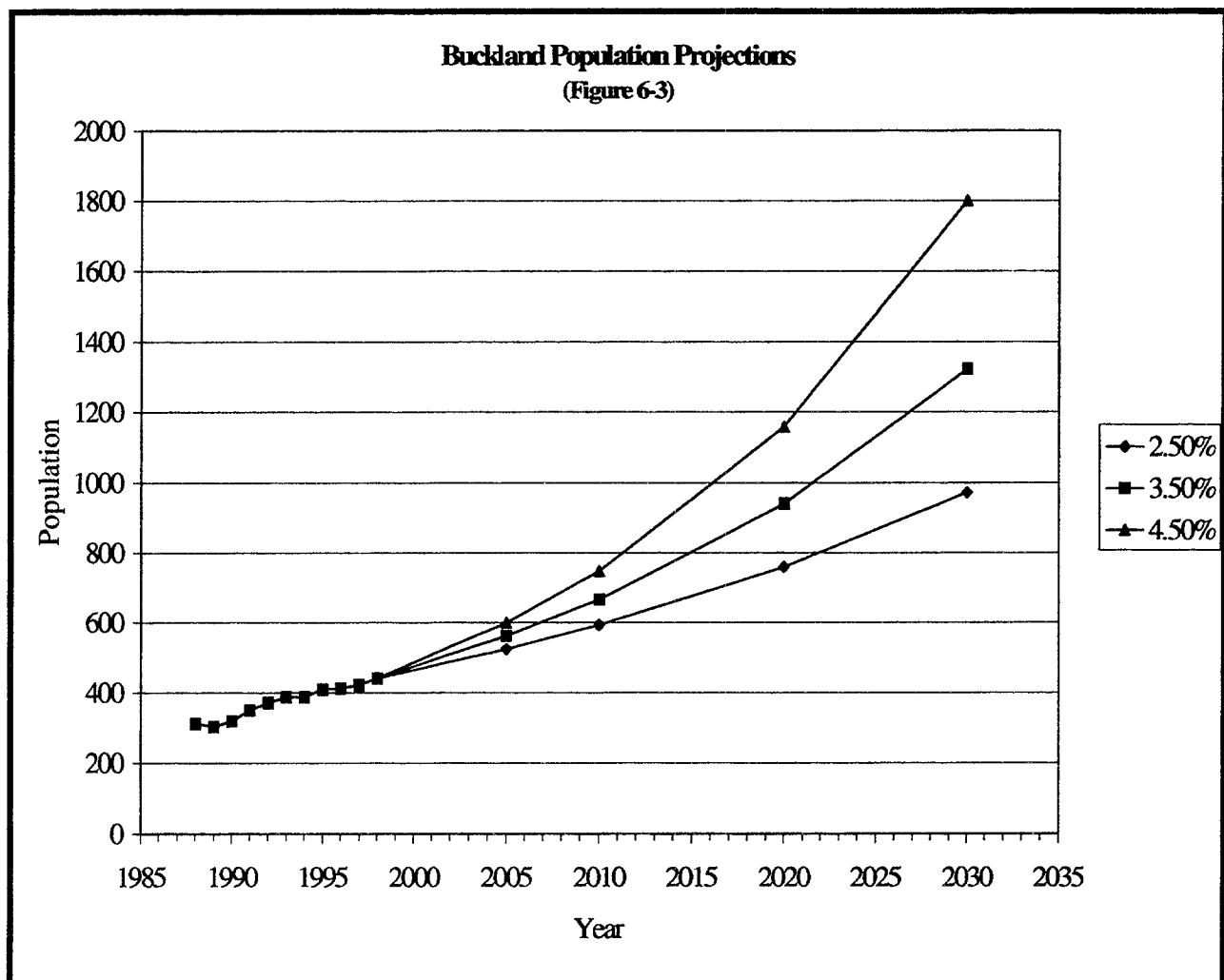
| Year | 2.50% | 3.50% | 4.50% |
|------|-------|-------|-------|
| 1988 | 312 | 312 | 312 |
| 1989 | 302 | 302 | 302 |
| 1990 | 318 | 318 | 318 |
| 1991 | 349 | 349 | 349 |
| 1992 | 371 | 371 | 371 |
| 1993 | 386 | 386 | 386 |
| 1994 | 386 | 386 | 386 |
| 1995 | 409 | 409 | 409 |
| 1996 | 411 | 411 | 411 |
| 1997 | 421 | 421 | 421 |
| 1998 | 440 | 440 | 440 |
| 2005 | 523 | 560 | 599 |
| 2010 | 592 | 665 | 746 |
| 2020 | 757 | 938 | 1159 |
| 2030 | 970 | 1323 | 1800 |

*Years 1988 – 1998 are actual population numbers.

The Low Scenario shows the City of Buckland more than doubling its population within 30 years. This scenario would be supported by little or no economic increase, coupled with outmigration from the region as federal, state and local revenues fall off after the turn of the century.

The middle range forecast is an extrapolation based on the actual growth rate of the Community in the recent past. This is the “Best Estimate Scenario” in which revenue and employment continues to expand, but that major resource development does not take place. Under this scenario the population of Buckland doubles at twenty years. The population growth between 2020 and 2030 is more uncertain because of the factors that would have to exist in order to support that number of people. Buckland’s actual population growth likely will be influenced by factors such as federal, state, and local revenues; infrastructure and housing; and economic growth.

The High Scenario shows the greatest rate of steady increase, from nearly 600 in the year 2005 to 1800 by the year 2030. This scenario corresponds with major resource development and associated increases in public revenues, and improvement and expansion of infrastructure, which supports economic expansion. Such revenue and economic opportunities would support a more rapidly growing population.



EXISTING HOUSING AND CONDITIONS

Housing in the Community has been provided over the past 30 years by various government housing agencies. The Alaska State Housing Authority constructed 12 housing units in 1970. The Bureau of Indian Affairs constructed seven homes in 1971 and three more in 1974. NANA Housing Authority constructed 22 houses in 1981. According to the 1990 U.S. Census, Buckland had 70 single-family residences. In 1994, the Northwest Inupiat Housing Authority constructed 14 new houses bringing the total number of private residences to 84 units. There is no multi-family housing in Buckland.

The number of people per household in Buckland is 5.2, which is approximately 50 percent higher than the United States average and over 40 percent higher than the state average. A state survey summarized several characteristics of homes in the Northwest Arctic Borough. The houses are among the smallest of all regions in the state, averaging just 731 square feet. These statistics imply that Buckland has large households living in small houses.

According to a survey designed by Larsen Consulting Group for the Utility Facilities Plan, the average age of houses in Buckland is 18 years. The existing sewer and water service to houses are as follows: 3 percent of the Community operates with the AlasCan system; 5 percent use holding tanks and honey buckets, 31 percent use a holding tank only, and 61 percent use honey buckets. The existing water source systems include: 9 percent delivered, 82 percent self haul, and 9 percent utilize both delivered and self haul.

A Community Meeting was held on October 29th and 30th, 1998, in which a list of desires related to housing were defined. The Community identified what they wanted to see inside and outside of their homes, neighborhoods, and the community itself. See Appendix B, for the community involvement results.



HOUSING PROJECTIONS

Future land use needs for housing and community expansion in Buckland are based on the estimated population growth during the 30-year planning period. Population growth was determined by projecting historical population data at 3.5 percent.

The following table presents projected housing and land needs based on projected population growth. Housing projections were completed using 4 persons per household and 5.2 persons per household. Occupancy of 4 persons per household brings Buckland closer to the Statewide average; a 5.2 rate maintains current conditions. This information will give the Community two

sets of data from which to operate in regards to housing needs. The projection for the required number of new houses does not include the 84 existing structures, and the projections are cumulative (total number of new houses needed between now and a specific future date). The projections that address the corresponding acres of required land were calculated assuming 20,000 square feet are needed per house, taking into account the need for roads, utilities and other public facilities.

PROJECTED POPULATION AND HOUSING NEEDS

| Year | Projected Population | Required Number of New Houses* (at 4 persons per household) | Required Number of New Houses* (at 5.2 persons per household) |
|--|----------------------|---|---|
| 2005 | 560 | 56 | 24 |
| 2010 | 665 | 82 | 44 |
| 2020 | 938 | 150 | 96 |
| 2030 | 1300 | 246 | 170 |
| *Does not include the 84 existing houses | | | |

LAND NEEDS

| Year | Acres of land required at 4 persons per household* | Acres of land required at 5.2 persons per household* |
|---|--|--|
| 2005 | 26 | 11 |
| 2010 | 38 | 20 |
| 2020 | 69 | 44 |
| 2030 | 113 | 78 |
| *Estimated 20,000 sq/ft per lot (includes roads, utilities, and public facilities) | | |

COMMUNITY EXPANSION IMPLICATIONS

Community expansion in the form of new housing is badly needed in the community. Presently, some homes have as many as 12 occupants. Given average household population in Buckland, and the population projections, it is likely that Buckland will soon outgrow its available land. Appropriate planning that leads to community buy-in will help avoid future piecemealing of sewer and water systems. For example, water system alternatives must carefully consider future expansion areas. Failure to properly evaluate the magnitude of future water demands and the location of those demands may result in a system that is undersized in the near future and more costly to operate than necessary. In some cases, complete replacement of a water system is necessary at a loss of millions of dollars to the taxpayer.

8.0 LAND USE

LAND OWNERSHIP

The land ownership in Buckland is similar to other rural communities in Alaska, and is divided between the Federal and State Government (primarily airport lands), NANA Corporation, City of Buckland, Northwest Arctic Borough (school site), private individuals, and Native Trust lands (including Native Allotments, and Native Townsite lots). Within the NANA Region, all of the Alaska Native Claims Settlement Act of 1971 (ANCSA) village corporations, except for the Kotzebue village corporation, consolidated with NANA Corporation (the ANCSA regional Native corporation). NANA owns both the surface and subsurface estate of ANCSA corporation lands in Buckland. The City of Buckland is entitled to select up 1280 acres of land from the NANA Corporation under the ANCSA 14(c)(3) reconveyance process. Much of the land surrounding the Community is owned by NANA, the Bureau of Land Management, or the State of Alaska. Land ownership is shown on the following map.

In 1967, U.S Survey No. 4482, including Tracts A through E, was approved by BLM. Tracts A, C, and D are designated as the town site. Tract B was deeded to the State of Alaska and reserved as the airport site. In 1984, Tract B was conveyed to the City of Buckland, with the exceptions of the airport site and the school site. Tract E is across the river from the existing town site.

There are several types of land ownership problems in Buckland that need to be addressed. Many buildings and houses are located within platted road right-of-ways and within easements. A few homes are currently straddling property lines. There are a few well-traveled roads located outside of the right-of-ways and crossing several properties. There are also currently many homes without legal access. In addition, there are utilities located within properties without easements or any other clearly defined access. In many cases, development disregarded land ownership and access issues on lots, primarily housing.

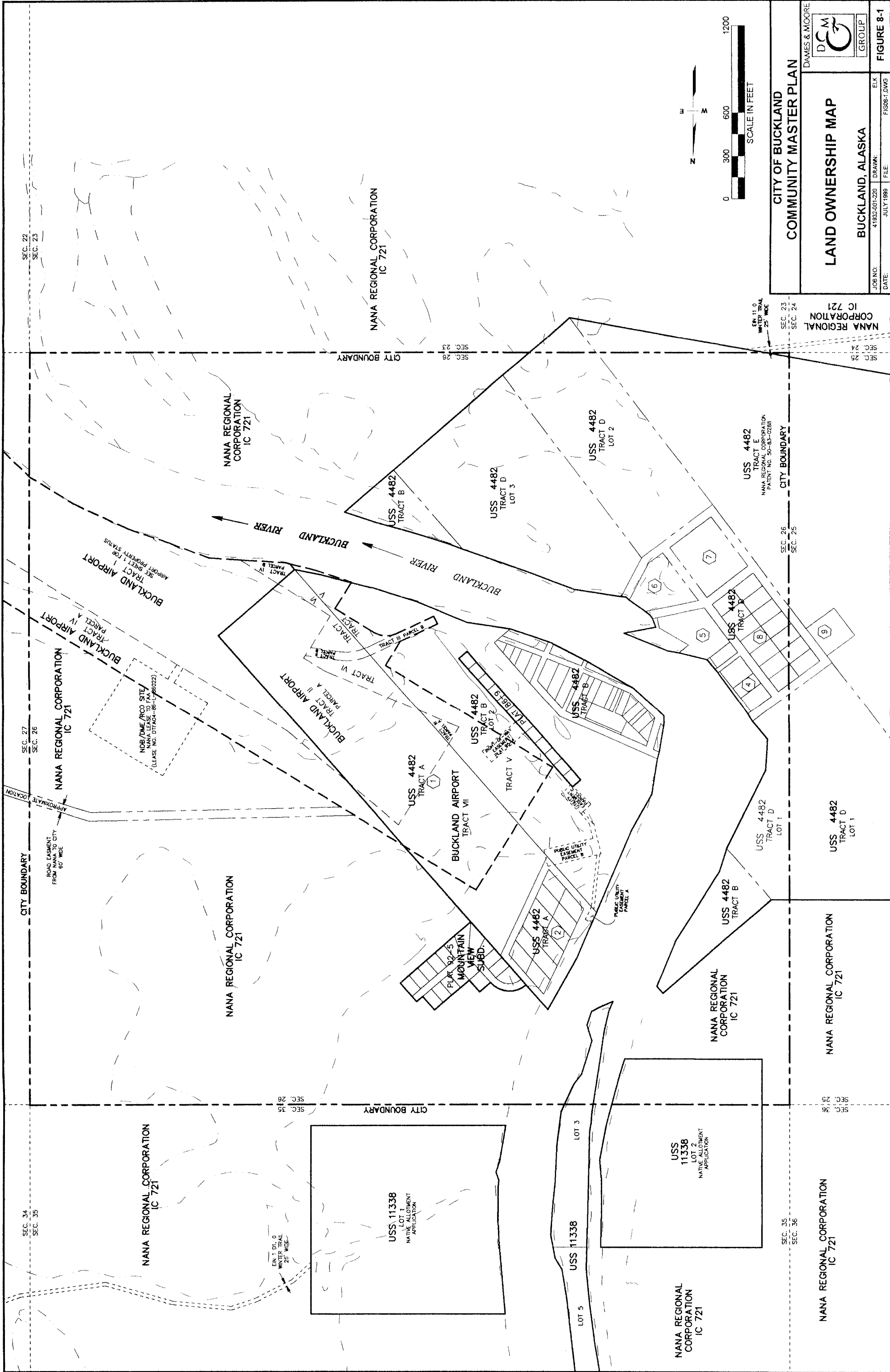
LAND USE


Land use within the City of Buckland is a mix of residential, transportation (roads and airport), utilities and infrastructure, public facilities, and subsistence and traditional uses.

Residential: Residences are located in four general areas:

- the older part of town along the Buckland River;
- a row of houses directly to the north along the road leading to the Buckland Airport (old airstrip site);
- a tract upriver of the school site and current water intake building, and
- the new housing development in the Mountain View Subdivision.

Four additional platted but undeveloped city-owned lots are adjacent to existing housing. Additional platted Native townsite lots owned by the City are located across the Buckland River in the old townsite.



| | | | | | |
|--|----------------------------------|--------------------------------|---|-------------------------------------|--------------------------|
| <p>CITY OF BUCKLAND COMMUNITY MASTER PLAN</p> | <p>LAND OWNERSHIP MAP</p> | <p>BUCKLAND, ALASKA</p> | <p>JOB NO: 41932-001-220 DATE: JULY 1989</p> | <p>DRAWN: FILE: F1936-1.DWG</p> | <p>ELK</p> |
| <p>DAMES & MOORE</p> | | |  | | <p>FIGURE 8-1</p> |

Public Facilities and Utilities: The school, washeteria, clinic, and electrical power generators are located in a central area of the Community. The City offices, City shop building, the Buckland IRA offices, and IRA store, are located just north of the second housing area. The landfill and one sewage lagoon are located approximately a mile southwest of town along the village sanitation road. A second lagoon, which serves the school, teacher housing, washeteria, and clinic, is located within the Community. The community cemetery is located across the Buckland River on top of a hill in the old townsite.

Several areas within the Community are used for subsistence and traditional uses, such as berry picking and loading/unloading boats.

LAND MANAGEMENT

Lands within the City of Buckland are subject to various land management plans and regulations. The Northwest Arctic Borough administers a comprehensive plan and land management regulations that apply to development within the Community. The Community itself is classified as a village zone under the plan and regulations. The Borough also has an approved coastal management plan, which is tied to the Alaska Coastal Management Program (ACMP). Certain types of activities requiring Borough, state or federal permits are subject to a consistency review with the Borough and state coastal management programs. The Borough has a Planning Commission and Buckland intends to establish a Village Planning Commission.

Land Suitability for Development: As a Community located in a major river, Buckland is subject to regular flooding and erosion problems. Fine-grained, ice rich soils are also common in the area, creating problems for potential development. These natural hazards should be considered when identifying areas for suitable community expansion (see Section 13.0, Community Expansion Sites).

Flooding: The river floods annually, primarily in the spring, flooding the existing townsite. In addition to structural damage caused by high water levels, structures may also be damaged by river ice transported by floodwaters through the Community. In approximately 1989, eleven homes were relocated to their present locations on Buckland Road to avoid flooding at their original locations. Areas on the south side of the river that are above flood levels are extremely limited.

The extent and nature of flooding is a significant consideration in planning for community expansion and installation of environmental infrastructure. The potential for flooding will affect the ability to obtain funding for construction of housing and public utilities and facilities. It is technically possible to construct flood control structures, or fill in low-lying areas with gravel to bring them above flood levels. However, such solutions may be costly, and funding may be difficult to obtain. More detailed information on flooding is provided in Section 5.0, Natural Hazards.

Erosion: Erosion is a significant problem along portions of the Buckland River. It is particularly bad upriver of the school site, where houses are at risk of falling into the river. The water intake

facility must be moved back from eroding areas on a regular basis. The natural rate of erosion may result in a change in river channel, further affecting flooding problems.

The extent and nature of erosion is a significant consideration in planning for community expansion and installation of environmental infrastructure. It will affect the ability to obtain funding for construction of housing and public utilities and facilities. It is technically possible to construct erosion control structures. However, such solutions may be costly, often fail over time, and funding may be difficult to obtain. More detailed information on erosion is provided in Section 5.0, Natural Hazards.

Soils: The area is generally underlain by continuous permafrost. This contributes to extensive surface water during the summer months, caused by perched water held at the surface by underlain impermeable permafrost. Aerial photographs reveal polygonal patterns in the ground surface in the areas south of town and upriver of town. This suggests soils ribboned with ice wedges underlain with shallow permafrost.

The extent and nature of ice rich soils is a significant consideration in planning for community expansion and installation of environmental infrastructure. Such soils are susceptible to thermal erosion along the banks of rivers, and are subject to thawing, settlement, and movement if disturbed by improper development. The presence of permafrost will affect the design and cost of construction of housing and public utilities and facilities.

HOUSING/LOCATION/RELOCATION PRIORITIES

Erosion along the riverbank south of town is proceeding at a rapid pace. The top of the bank is receding towards the road and threatens the post office and adjacent subdivision. The top of the bank has moved inland approximately 140 feet since 1972. The COE estimated that in 30 years the south bank erosion would impact the homes closest to the river and undermine the road accessing the subdivisions south of town. In 50 years, outside the scope of this Master Plan, the erosion will completely take out the road and impact the second row of houses.

9.0 ECONOMY

OVERVIEW OF THE ECONOMY

The economy of Buckland is similar to most rural Alaska communities and can be described as a mixed cash subsistence economy. Historically, the economy has been dependent on government jobs; reindeer herding and mining have also been important economic activities in the past.

According to the 1990 census, the median household income in Buckland was \$18,906. The median family income was \$19,688. Approximately, 104 persons, or 32.8% of the Community, were estimated to be living below the poverty level. The total work force in Buckland was estimated at 65 persons. The number of persons that are not in the labor force was about 86 persons, or 59% of the eligible work force. Finally, the 1990 unemployment rate was 12.3%; however, this rate included part-time and seasonal jobs, and practical unemployment or underemployment is likely to be significantly higher.

Economic development influences the growth of the Community and the ability of people to remain in the village and make a living. There are three important elements of the Buckland economy: wage employment, transfer payments, and subsistence.

Wage Employment: A current estimate of the primary employers and jobs in Buckland are shown below:

| <i>Major Employer</i> | <i># of jobs</i> |
|--------------------------------------|------------------|
| City of Buckland | 10 |
| Buckland IRA | 9 |
| Red Dog Mine (NANA/Cominco) | 14 |
| Northwest Arctic School District | 21 |
| Maniilaq Association (Health Clinic) | 6 |
| Air Taxi/Air Cargo Agents | 5 |
| State of Alaska | 1 |
| U.S. Postal Service | 1 |

Local and regional organizations account for the majority of jobs in Buckland. Seasonal employment opportunities are available, primarily with the City and through fire fighting opportunities.

The following community business licenses were on file with the Alaska Department of Commerce and Economic Development as of January 1999:

| <i>Business Name</i> | <i>Description</i> | <i>Standard Industry Code</i> |
|-------------------------------|------------------------------------|-------------------------------|
| Buckland Native Products | Food & Related Products | 2000 |
| Gavin's Fuel Delivery | Electric, Gas & Sanitation Service | 4900 |
| Buckland Native Store | General Merchandise Store | 5300 |
| Hadley's General Store | General Merchandise Store | 5300 |
| MJ & Sons | Eating & Drinking Places | 5800 |
| Buckland Fuel Project | Retail Store | 5900 |
| Gavin's Guns | Retail Store | 5900 |
| Gary & Natalie's Video Rental | Video Tape Rental | 7800 |
| Buckland Sports Club | Amusement & Recreation | 7900 |

Transfer Payments: Payments to individuals from various regional, state and federal programs are an important source of cash in many Alaskan communities. Examples include the Alaska Permanent Fund Dividend and Social Security payments. The Community benefits through governmental transfer payments, such as municipal revenue sharing and the Power Cost Equalization program, that reduces the cost of services to local residents. However, due to recent state budget shortfalls, these payments have been reduced, and some are in danger of being eliminated.

Subsistence: Subsistence plays an important economic, social, and cultural role in the Community (see Section 4.0, Planning) for discussion of subsistence activities. Fish and game harvested through subsistence activities are distributed throughout the Community and provide significant economic benefits by providing food that otherwise would have to be purchased.

ECONOMIC DEVELOPMENT OPPORTUNITIES

Several economic development proposals are being pursued or discussed.

Native Food Products and Crafts: The Village is pursuing development of a Native food product and crafts manufacturing facility to produce reindeer sausage, berry products, Labrador tea and ivory and wood carvings. They have run into obstacles receiving permits due to the lack of sewer and water infrastructure.

Reindeer Herding: Commercial reindeer herding has occurred in Buckland sporadically for many years; a member of the Community currently holds a license to commercially raise reindeer. The primary obstacle to reindeer herding include the loss of reindeer to wild caribou herds that migrate through the area, and limited outlets for reindeer products.

Lodging/Restaurant: The village currently lacks food and lodging services for visitors; development of both lodges and restaurants would provide facilities for visiting officials, technicians, and tourists. In order to determine the financial feasibility of such facilities, an

accurate estimate of potential demand should be prepared, based on estimates of the annual number of work-related and casual visitors to Buckland. Major construction projects such as constructing of water and sewer facilities could create additional demand for these services.

Tourism: There has been some discussion in the Community of the possibility of developing a small-scale tourism industry. Tourists currently visit Kotzebue through Alaska Airlines tour packages. It may be possible to bring tourists to Buckland, although serious thought should be given to the types of activities available in Buckland that would be attractive to tourists. Typical activities include cultural exhibits and demonstrations (dancing, processing Native foods), viewing wildlife, kayaking/rafting/canoeing and sport hunting and fishing. Because tourism can be socially disruptive to small communities, consensus should be developed on acceptable levels of tourism

Sport Hunting and Fishing Guides: Some local residents are considering becoming sport hunting and fishing guides, which can create income and visitor expenditures within the Community. However, as with tourism, these activities can be socially disruptive and clash with subsistence practices; consensus should be developed on acceptable levels of sport hunting and fishing

Local Retail Sales and Services: There may be opportunities to expand retail sales and services over current levels. Examples include video rental, small engine repair and taxi services.

Construction Activities: Construction associated with school expansion, and potentially with new housing and water and sewer improvements, provide employment activities for local residents. A list of the local workforce with construction skills, including areas of special skills, should be maintained by the City and IRA.

Fuel and Gas Delivery: Community residents brought up the need for fuel and gas delivery service. This service could be run by an individual or organization.

Relationship of Economic Development to Water and Sewer Facilities: Selection of the type of sanitation facilities may have a significant effect on some of the economic opportunities available for the Community. Processing facilities, restaurants and lodges are likely to need piped water and sewer in order to receive state permits and to make them economically feasible. Tourists are less likely to visit a community without adequate water and sewer facilities. The lack of adequate water and sewer facilities has hampered development of a Native foods processing facility in Buckland.

In addition, construction of the water and sewer project will create opportunities for local employment and the local services discussed above. Estimates of employment numbers and skills needed should be prepared, and local and regional organizations should begin evaluating available local workforce and training needs. Similar assessments and commitments should be evaluated for food and lodging services.

COOPERATIVE EFFORTS

The City and Buckland IRA have actively pursued economic development activities. Partnerships with various regional and state organizations provide other means of pursuing economic development opportunities. The Northwest Arctic Borough, NANA Corporation, and Maniilaq Association have programs that can provide assistance to Buckland.

- Northwest Arctic Borough: assists with economic development through various programs, and assists with requests for funding capital projects that contribute to economic development
- NANA Corporation: provides economic development assistance, and coordinates with the community for use of lands and resources
- Maniilaq Association: has programs to assist with economic development and government administration

10.0 WATER, SEWER AND OTHER PUBLIC UTILITIES

Sanitation facilities are extremely limited in Buckland. Piped water exists for only a limited number of structures in the Community, such as the school, teacher housing, washeteria, and clinic. All other residents rely on water haul. Flush toilets are located in the buildings connected to the piped water system and in the limited number of homes supplied with flush and haul systems. Most of the residents rely on Honey Buckets for human waste disposal.

WATER SYSTEM

Water Source: The water source for the Community is the Buckland River. Raw water is currently pumped from the Buckland River, treated in the washeteria building, and stored in a 183,000-gallon insulated tank located adjacent to the washeteria/water treatment building. Water distribution is accomplished through a variety of methods including piped distribution, community haul and individual haul. The current water treatment plant and washeteria have been in service since December 1986. The Indian Health Service (IHS) provided this system at the request of the City of Buckland.

The current water collection method is labor intensive and unreliable. Water must be pumped from the river on a monthly basis. This creates a water storage shortage at the end of each cycle resulting in insufficient water storage in the event of a fire. Each month, the portable pump must be mobilized to the river and connected to the water transfer piping. The transfer pipe is no longer set with a constant grade due to movement during flooding and erosion. Groundwater wells have been attempted in Buckland in the past with no success in an effort to develop an alternative water supply.

Water Treatment: The water treatment system provides filtration and chlorination of the river water. Two 3-foot diameter sand filters are used to remove large particle contaminants from the river water. Smaller particles and dissolved contaminants cannot be removed because coagulants are not used prior to filtration. After filtration the water is disinfected using calcium hypochlorite and stored in the 183,000-gallon storage tank. The tank provides the contact time required to inactivate remaining pathogens and the storage required between pumping cycles. The water treatment system is designed to serve a maximum population of 200 persons. The existing water treatment process does not meet current regulatory requirements for surface water treatment. In order to provide the Community with a safe water supply that meets regulatory requirements, the treatment process must be improved.

Water Storage: The existing water storage tank in Buckland consists of an 183,000-gallon insulated welded steel water storage tank. The tank was provided by the IHS in 1987 and is located south of the school near the washeteria building. The tank is supported by timber cribbing on an insulated gravel pad. The tank currently supplies water to the school, teacher housing, washeteria and clinic. A community watering point is located at the washeteria. The water storage tank must be refilled on average of once a month. When the tank was originally installed it was estimated that water usage would require the tank to be filled every two months.

Water Distribution: The existing water distribution system for the Community of Buckland consists primarily of truck and hold. Currently 220-gallon individual water storage tanks are located at thirty-six individual residences. The City delivers water on a regular schedule to these homes that are equipped with truck and hold storage tanks. Water is delivered to the homes using a 300-gallon tank mounted on the bed of a Hummer truck. The truck is plagued with breakdowns and is expensive and complicated to fix.

In addition to truck and hold, a piped distribution system is in place that serves the washeteria, school, teacher housing and health clinic. Piped water is pressurized and stored in two 370-gallon diaphragm tanks located in the water treatment/washeteria building. Water is then supplied through a small diameter circulating water main to the teacher housing, health clinic, and school. The washeteria includes four showers, two toilets, three washers, three dryers, and an exterior watering point. Individuals may haul their own water from a coin operated dispensing station at the washeteria. The current average water usage for the entire community is approximately 5,600 gallons per day (rate is averaged over one year, and includes the school).

WASTEWATER SERVICE

Wastewater from the school, washeteria, teacher housing and health clinic is piped to a treatment lagoon that is located near the washeteria and generally upstream of the main community. The rest of the Community relies on honey buckets and flush and haul systems. Honey bucket waste and flush and haul waste is disposed of in a lagoon located approximately 6,500 feet west of the Community. A honey bucket disposal site is also located at the solid waste landfill.

Wastewater Collection: Currently, there are four types of wastewater collection systems in use in the Community of Buckland. The road system within the Community allows flush and haul collection of the wastewater with a 4-wheel drive vehicle. Additionally, three homes are served using AlasCan treatment units. The school, teacher housing, washeteria, and clinic are plumbed and connected to a small sewage lagoon located nearby. Wastewater is collected from the school, teacher housing, washeteria and clinic and pumped through a 2" HDPE force main to the lagoon. The remainder of the Community uses honey buckets.

The most common wastewater disposal system in Buckland is the honey bucket system. During the summer, honey bucket waste is stored in collection stations in front of the residences. During the winter, full honey bucket bags are placed on the ground in front of the homes in cardboard boxes and allowed to freeze. The waste is collected by the City and hauled to the sewage lagoon located west of town.

The second most common form of wastewater disposal in Buckland is the truck and haul system. Wastewater is stored in holding tanks at each individual residence, which have the truck and haul system. The waste is removed from the holding tanks using a vacuum pump and tank mounted on a trailer and towed by truck to the sewage lagoon located west of town. In 1993, plumbing was installed in 19 existing homes and 14 newly constructed HUD homes. The work included interior piping, 220-gallon potable water tanks and 350-gallon sewage holding tanks. These flush and haul systems are serviced by the City's truck and haul operation.

Three AlasCan sewage composting toilet systems are also in use in Buckland. These units are sized for only single family use and combine both the collection and treatment processes for the wastewater.

Wastewater Treatment: Wastewater treatment in the Community is accomplished mainly in lagoons although three residents have composting toilet systems (the composting toilet system currently in use in the Community is the AlasCan unit). Buckland has two sewage lagoons and a honey bucket disposal site. The honey bucket disposal site is located within the solid waste landfill site. The main sewage lagoon, located west of town, is an unlined wastewater treatment lagoon. The lagoon consists of a fenced entrance, which limits access to the naturally occurring tundra pond. This site was developed in 1992. The lagoon is located at an elevation that is below the five-year flood level. During flooding, wastewater can mix with the surrounding water creating a potential public health hazard.

The lagoon located near the washeteria was reconstructed in 1988 to serve the washeteria and health clinic. The design treatment capacity of the lagoon is 1,500 gallons per day, which corresponds to a maximum design population of about 300 persons. It is a single cell structure and is designed to store raw sewage during the winter months. Wastewater is apparently seeping from the lagoon to the river, which prevents the lagoon from overflowing from sewage. The lagoon may present a contamination hazard to water sources near the facility. In addition, it is located in an area that is eroding quickly and presents an odor nuisance for community buildings and many residences in the area.

Wastewater Disposal: The community wastewater lagoon located west of the Community overflows onto the tundra, as the volume becomes too high. During flooding wastewater from the lagoon may flow towards town creating a potential health hazard. Local residents have noted that fish live in other areas of the large tundra pond that forms the lagoon. They are concerned that some of these contaminated fish may return to the river during flooding conditions and may be caught for food.

SOLID WASTE DISPOSAL

The solid waste disposal site in Buckland is located approximately 4,000 feet west of the Community. The landfill consists of two-diked disposal cells enclosed with chain-link fencing. A gravel road is used to access the site. The City is responsible for hauling the refuse to the landfill. This facility was constructed in 1992 under a Village Safe Water project.

Solid Waste Collection: The existing solid waste collection system in Buckland consists of a typical rural Alaska system. The City has provided plywood collection containers with lids throughout the Community. The residents place trash in the plywood containers. When the containers are full, the City collects the refuse and hauls it to the landfill.

Solid Waste Disposal: Buckland's current solid waste disposal is considered an open dump/landfill. The main issue that poses a safety hazard is the distance of the disposal site from the runway. The current distance is roughly 1,620 feet. Birds feeding on or around dumpsites

impose a hazard to local aircraft. Federal EPA and FAA regulations require dumpsites to be located a minimum distance of 5,000 feet away from airports serving piston-powered aircraft.

ELECTRIC UTILITY

All community electricity is provided by a village co-op maintained by the City of Buckland. The power generation building consists of three diesel-powered generators, which includes two 250 kilowatt and one 150-kilowatt generator. Residents are currently charged \$0.33/kWH and an additional \$12 per month for meter reading.

The Community of Buckland has had a recent power plant upgrade designed by the State of Alaska Department of Energy (DOE). The upgrade included three new Onan prime power generators (two 250kW generators and one 150kW generator), and an upgrade of the generation voltage from 208V to 480V. The new facility includes paralleling switchgear that enables several combinations of generators to be connected in parallel. However, from discussions with DOE personnel it appears that the radiators are not sized to cool two generators on line at one time. Therefore, the existing plant is limited to delivering approximately 250kW to the village.

The village switchgear main breaker is rated at 600A, 480V three-phase; four-wire. The switchgear serves the village main distribution substation that steps up the system to 2400V for village distribution. The main distribution substation consists of three 100kVA single-phase transformers (connected as a three-phase system) set on a platform between two power poles approximately 15 feet above grade. The distribution system feeds radially both to the north and south sections of town from this point. The distribution throughout the village consists of 2400V three-phase, four-wire overhead distribution system with pole mounted distribution transformers.

Based on information provided by the City of Buckland power plant personnel, the village has experienced a peak load of approximately 240kW over this past winter. There are several projects in the planning stages for the village including a new school addition that will be bid this spring. It is anticipated that the power plant load will increase by approximately 130 to 150kW when the school addition comes on line. This means that the power plant will need to be capable of supplying up to 400kW of demand power by the winter of 2000, and expansion of the system will be required. In addition, construction of a sewer and water system will generate operational demands for electricity, which should be factored into demand for power.

BULK FUEL

Bulk fuel storage tank sites include Northwest Arctic School District (5 tanks totaling 42,597 gal.), City Council/Power Utility (6 tanks totaling 70,000 gal.), and Village IRA Tank Farm (11 tanks totaling 157,900 gal.). Fuel is sold locally at the rate of \$2.65 for fuel oil and \$3.11 for gasoline. Most of the homes are currently heated with fuel oil furnaces. Some homes and the majority of flush-haul buildings are heated with Monitor heaters.

There is a strong need for a consolidated fuel facility. Several existing facilities are located within the floodplain, and have spill prevention and containment facilities that are inadequate under current standards. The Northwest Arctic School District is currently encountering

problems in obtaining permits for new tank facilities, due in part to the location of the proposed tanks within the flood plain. If access were available across the Buckland River to the old village site, it would be a good location for a consolidated tank farm that is out of the flood plain and can utilize a gravity distribution system.

BORROW SITES

There is a local source of gravel, and one borrow site has been established to extract silt, sand, and gravel for the purpose of general fill. The site is owned by NANA Corporation, which allows the City to use borrow material for city projects.

11.0 COMMUNITY FACILITIES

BUILDINGS

City Building: The city building houses the city administration, the IRA administration, and provides space for community meetings.

PUBLIC SAFETY

Village Public Safety: Buckland has a village public safety officer and a village police officer. The City operates a public safety office

FIRE PROTECTION

The Community of Buckland is currently without adequate fire protection. The fire department consists of 1 volunteer chief and 7 trained volunteer firefighters. The equipment consists of a fire-truck that is currently out of service, a portable 300-gpm water pump, a folding water storage tank, hoses and fire extinguishers. The fire department meets monthly for training and organizational activities. The department is currently utilizing the city Hummer as a fire truck, which is also used for hauling water to the homes. However, a new fire hall and fire truck are on the community's funding priority list.

SEARCH AND RESCUE

Search and rescue is provided on a volunteer basis, and is staged out of the city office building.

HEALTH CLINIC

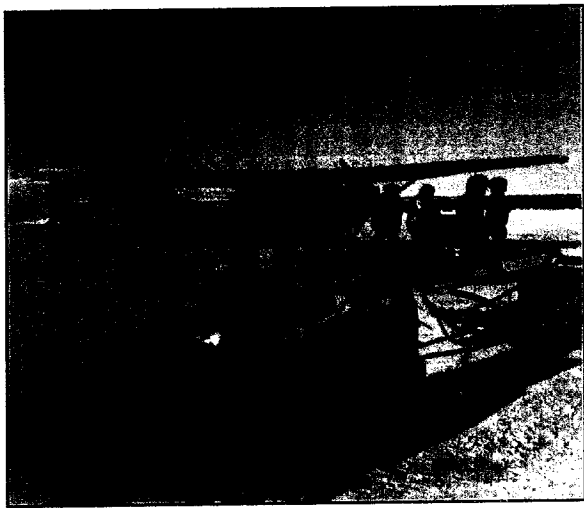
The Buckland Health Clinic was constructed in 1989 to provide health services to the residents of the Community. The building is a single story wood frame structure constructed on a post and pad foundation system. The facility consists of a waiting room, three exam rooms, a bathroom and a storage/office space. The clinic is open Monday through Friday providing for basic medical needs; however, all serious emergencies are flown to either Kotzebue or Anchorage.

EDUCATION

The Northwest Arctic Borough District provides education services for all 11 villages in the region and operates the school in Buckland. The district seeks to prepare students with skills to succeed in the modern world, enhanced by knowledge of the traditional Inupiat culture. The school serves 159 students from K through the 12th grade, and consists of three buildings, with a major building expansion project planned for 1999. Post-secondary education is available in Buckland through courses taught by the Chukchi Community College. Pre-school education is a pressing need in Buckland; the Community would like to establish a Head Start Program and a building to house the program.

COMMUNICATIONS

Telephone services are offered by OTZ from Kotzebue. Long-distance service is available through AT&T-Alascom. Buckland has access to radio through Alaska Public Radio KOTZ, selected network television through Alaska Rural Communications System, and cable TV through Microcom of Anchorage.



Buckland's major means of transportation consist of propeller driven airplanes, small boats, barges, and snow machines. There are no connections from the Community to the statewide road or rail system. However, a gravel road was recently constructed from the Community to a developed gravel source located three miles away. Buckland has a State-owned 3,000-foot gravel airstrip that serves a number of scheduled and chartered flights. The nearest large airport, and the hub for most chartered services, is Kotzebue. Barge service is also available from Kotzebue in the summer months. Fuel and supplies are transported each summer by barge up the Buckland River.

Transportation is accomplished by snowmachine and plane during the winter, and by small boat, barge, and airplane during the summer. Severe crosswinds can restrict flying during the winter.

AIR TRANSPORTATION

Buckland is located south of Kotzebue, which is approximately a 45-minute flight by plane. The newly upgraded 3,000 foot gravel airstrip in Buckland is state owned, and serves a number of scheduled and chartered flights. Airline service is available from Alaska Island Air, Baker Aviation, Bering Air, Cape Smythe Air, Hagland Air, and Yute Air.

WATER TRANSPORTATION

The Buckland River is a primary transportation corridor during the summer months. Arctic Lighterage transports fuel and supplies to Buckland by barge each summer.

GROUND TRANSPORTATION

The existing roads in Buckland are silty gravel, which are laid directly on the tundra/organic mat. Few of the roads travel within platted right-of-ways and in numerous areas, roads are traversing private lots. These roads are little more than trails; they are not built up and there is no ditching to direct drainage. Most of the road system in town is lower than the seasonal flood level so it is frequently covered with water and some sections wash out on occasion. The road extending from the washeteria to the airport access road is built on the abandoned runway. This section of road and surrounding houses may be built over large amounts of fill from the initial construction of the runway. A recently built road provides access to a rock and gravel source located three miles west of the Community.

COMMUNITY EXPANSION SITES

The following section is a list of options for community expansion sites that were developed by the Community of Buckland during the February 4th and 5th, Community Master Plan and Utility Facilities Plan meetings. On February 22nd, 23rd, and 24th 1999, two of the planning team members went to Buckland to exchange information with people about conditions that affect the options for water and sewer. One of the main conditions that will have an effect on the type of water and sewer available to Buckland is the location selected for community expansion. Buckland has nearly outgrown its current space, and the Community had to answer the following question: Where do you want your children to live? This big question affects the size, capacity and type of sewer and water system a community would choose. For example, if a community is too spread out, then utility systems cost more to build, operate, and maintain, which translates into higher utility bills.



SHORT-TERM EXPANSION OPTIONS

Availability of existing lots for community expansion in Buckland is extremely limited. The City of Buckland currently has four undeveloped lots that have been platted and are available for housing. A small number of additional lots could be developed by filling in some low spots with gravel to bring them above the 100-year flood level. However, it is unlikely that a large number of lots can be developed in this manner, without a significant amount of fill.

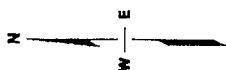
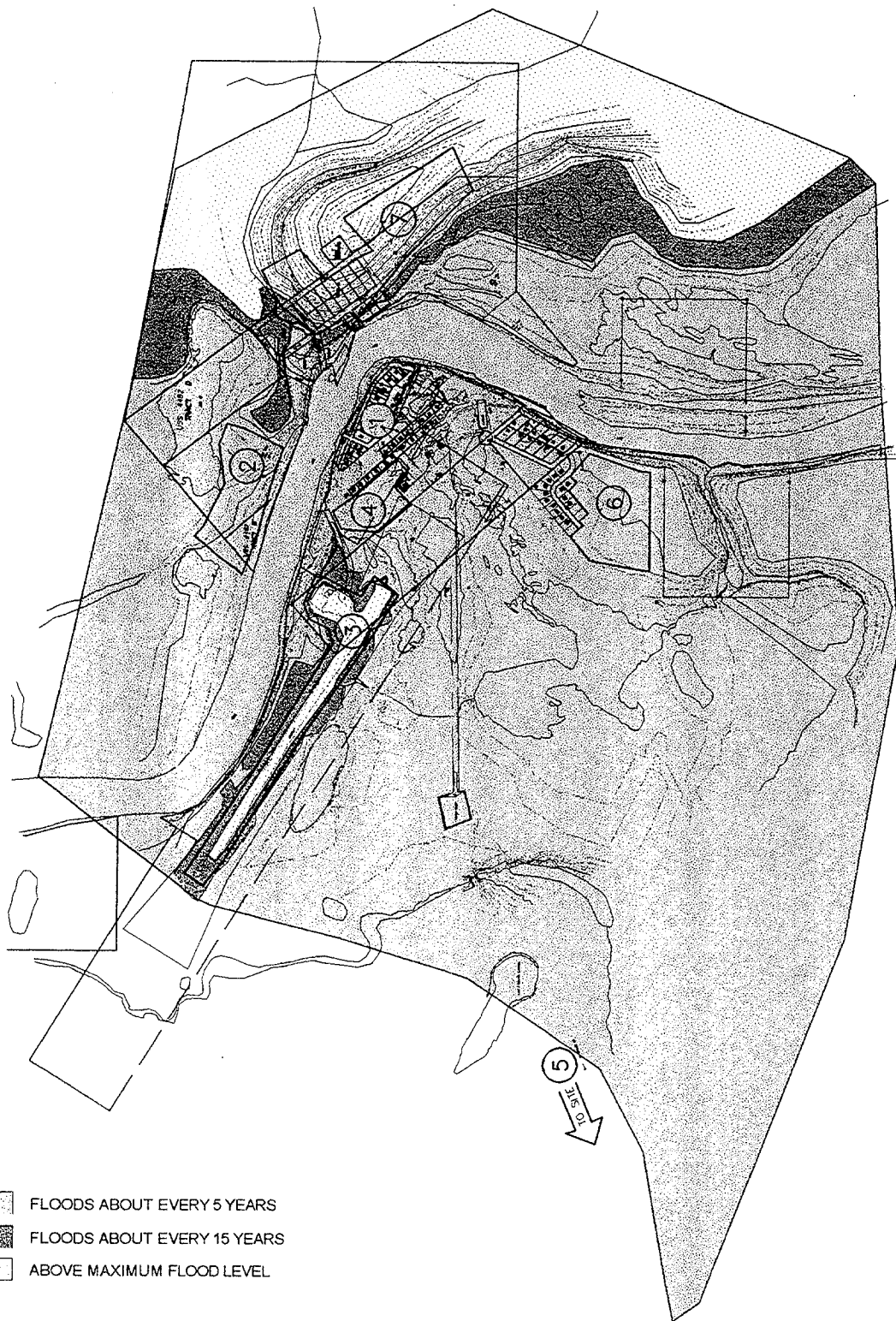
LONG-TERM EXPANSION OPTIONS


After receiving population and housing projections, flooding, erosion, and geotechnical information from the planning team, the following long-term expansion sites were selected by the Community of Buckland. The Community also developed the list of advantages and disadvantages of each site, and named some of the sites. The sites described below have numbers that correspond to locations shown on the Flood Map.

LAND AND USE OWNERSHIP CONSIDERATIONS FOR COMMUNITY EXPANSION

When identifying lands for development, land ownership, environmental conditions, availability of utility and transportation infrastructure, and cultural and social preferences must be considered:

- Is land available for development and who owns it?
- Is the available land suitable for development?
- Is infrastructure (roads and utilities) in place or readily accessible?
- How far is the land from the river, airport, city services, and family?



| | | | |
|---|--|-------------------|--------------------|
| CITY OF BUCKLAND COMMUNITY MASTER PLAN | | | |
| FLOOD MAP AND POSSIBLE COMMUNITY EXPANSION | | | |
| SITES 1-7 BUCKLAND, ALASKA | | | |
| JOB NO: 41832-001-220 | | DRAWN: ELK | |
| DATE: JULY 1989 | | FILE: FIG13-1.DWG | |
| DAMES & MOORE  GROUP | | | FIGURE 13-1 |

WHAT MAKES A GOOD EXPANSION SITE?

The following is a list created by the Community of Buckland to describe what is important in choosing a site for expansion:

- Must be out of the flood plain
- No erosion danger
- Stable ground
- Sloping ground
- River access
- Must be efficient for utility layout
- Land must be available for expansion
- Must avoid, or allow for expansion of culturally important areas

Site 1

This alternative involves building up areas within the existing developed area of the Community with gravel fill. It would involve bringing gravel into the existing area of the Community to raise the level of the ground above flood elevation. An enormous amount of gravel would be required to complete this task, which could make this alternative costly.

| ADVANTAGES | DISADVANTAGES |
|---|---|
| <ul style="list-style-type: none">➤ In town➤ Close (proximity) to Community➤ Short connect (for water and sewer)➤ Drain lakes, fill with gravel➤ Gravel fill reduces erosion➤ Easier access to river | <ul style="list-style-type: none">➤ Currently below flood plain➤ Crowding➤ Very high construction cost➤ Hydrologic concerns➤ High water & sewer operation cost➤ Does not provide area for growth➤ No safety access to high ground➤ Poor location for siting lagoon➤ Probably not fundable |

Site 2

This alternative would expand the Community across the river from the existing Community to a location downstream of the old town site. Construction of a bridge would be required to access the other side of the river. Housing developments and utilities would be located in a flood plain and vulnerable to flood damage.

| ADVANTAGES | DISADVANTAGES |
|--|---|
| <ul style="list-style-type: none"> ➤ Already surveyed as Buckland city lots ➤ Quiet ➤ Good view ➤ No erosion ➤ Bridge ➤ Boat harbor ➤ Access to high ground for safety ➤ Area for lagoon | <ul style="list-style-type: none"> ➤ Located in flood plain ➤ Many moose ➤ Many bear ➤ Poor boat landing ➤ High water & sewer operation cost ➤ Limited area for growth ➤ Costly bridge ➤ Poor soil conditions ➤ May require above ground utilities |

Site 3

This alternative would expand the Community onto the existing airport runway, which would require construction of a new airport at a different location. DOT&PF recently expanded the airport, and use of the structure for housing probably would not be well received by DOT and the State of Alaska.

| ADVANTAGES | DISADVANTAGES |
|--|---|
| <ul style="list-style-type: none"> ➤ Above flood plain ➤ Close to town ➤ No erosion ➤ Boat access ➤ No bridge ➤ Good soils | <ul style="list-style-type: none"> ➤ Located in flood plain ➤ DOT&PF controlled ➤ High water & sewer operation cost ➤ Limited area for growth ➤ Dusty ➤ New runway would be needed ➤ High utilities construction cost ➤ Poor soils conditions ➤ May require some above ground utilities ➤ String out utilities ➤ Poor location for siting lagoon |

Site 4

This alternative would expand the existing Community between the developed old airstrip and the new airstrip. Making the land habitable would require placement of a large amount of gravel fill to raise that area above the maximum flood elevation, which could make this alternative costly.

| ADVANTAGES | DISADVANTAGES |
|--|---|
| <ul style="list-style-type: none"> ➤ In town ➤ Close (proximity) to Community ➤ Short connect (for water and sewer) ➤ Drain lakes, fill with gravel ➤ Warm ➤ Many bears ➤ No bridge | <ul style="list-style-type: none"> ➤ Below flood plain ➤ Crowding ➤ Very high construction cost ➤ Hydrologic concerns ➤ High water & sewer operation cost ➤ No safety access to high ground ➤ Dump odor ➤ Mosquitoes ➤ Airplane noise ➤ Many bears ➤ Poor location for siting lagoon |

Site 5 – Hillside

This alternative would expand the Community to the hills located approximately four miles west of the Community. The location of the new development would be several miles from the existing town site and would effectively split the Community.

| ADVANTAGES | DISADVANTAGES |
|---|--|
| <ul style="list-style-type: none"> ➤ Many berries ➤ Lots of Game ➤ Pretty area ➤ Above flood plain ➤ Natural playground ➤ Good soils ➤ Lower utilities operation cost (for new area only) ➤ No bridge | <ul style="list-style-type: none"> ➤ Game animals ➤ Too far from town and school ➤ Two water and sewer systems (higher maintenance costs) ➤ Winter storms ➤ No safety access to high ground for existing Community ➤ Separates Community ➤ Far from river |

Site 6 – Mountain View Extension

This alternative would expand the Community up river beyond the newest subdivision. The location of the new development would extend past the last phase of HUD housing. This area is subject to severe erosion, appears to consist of ice-rich soils, and may not be easily accessible in the future

| ADVANTAGES | DISADVANTAGES |
|---|---|
| <ul style="list-style-type: none"> ➤ Many berries ➤ Pretty area ➤ Less traffic ➤ Less fill than downtown ➤ No bridge ➤ Close to river | <ul style="list-style-type: none"> ➤ Located in flood plain ➤ Ice rich soils ➤ Too far from town and school ➤ Above ground utilities required ➤ Blueberry area ➤ No safety access to high ground ➤ Serious erosion ➤ Strings Community out ➤ No bridge ➤ No propeller boat access ➤ Poor location for siting lagoon ➤ Dangerous sink holes possible ➤ Costly road construction |

Site 7 – Sunny Side

This alternative would expand the Community across the river to an old town site on the hill located north of town. Construction of a bridge would be required to access the other side of the river. The location would allow for construction of piped water and sewer in an area that is above the flood plain. Gravity water and sewer would be available, which would benefit service to the existing Community and reduce operational costs for all residents. This area would allow for the construction of an elevated water storage tank, which would reduce the cost of water supply to the existing Community and provide water for fire fighting. The location also would allow for construction of a sewage lagoon outside of the flood plain.

| ADVANTAGES | DISADVANTAGES |
|--|---|
| <ul style="list-style-type: none"> ➤ Out of flood plain ➤ Good place for tank farm ➤ Plenty of expansion room ➤ Great place for a lagoon ➤ Bridge access to cemetery ➤ Great place for a dock ➤ Summer wind keeps bugs down ➤ Gravity water and sewer ➤ Lower utility cost ➤ Access for subsistence ➤ Safety access for fires and floods ➤ Close to existing Community ➤ Good soils ➤ Below ground utilities ➤ Elevated storage for fire fighting | <ul style="list-style-type: none"> ➤ Bridge required ➤ Rocky beach ➤ Winter storms ➤ Tussocks ➤ Blueberry area ➤ Sloping ground ➤ No swimming areas ➤ Needs dock ➤ Need room around cemetery |

The Community of Buckland chose Site 7 as the selection for community expansion. Joint Resolution 99-01, in part, reads:

A JOINT RESOLUTION OF THE NATIVE VILLAGE OF BUCKLAND AND THE CITY OF BUCKLAND REQUESTING SUPPORT OF VILLAGE EXPANSION AREA, KNOWN AS THE NORTHSIDE OF THE BUCKLAND RIVER.

WHEREAS, it is the desire of the Municipality of Buckland to work with the U.S. Army Corps of Engineers to install a water and sewer system for the residents of Buckland, and

WHEREAS, the U.S. Army Corps of Engineers has requested planning preference statements from the Municipality of Buckland.

THEREFORE BE IT RESOLVED, that both the Native Village of Buckland and the City of Buckland support the village expansion area, known as the Northside of the Buckland River, identified in the community meetings in Buckland on February 4th and 5th, 1999.

14.0 IMPLEMENTATION

GOAL – *Implement the Buckland Community Master Plan by showing how the plan can be used, and by identifying specific actions to be taken, who is going to do it, and when it should be done*

OBJECTIVES

The key to a successful Community Master Plan is implementation. Implementation identifies what specifically needs to be done, who is going to do it, and when it should be done. Implementation of the Buckland Community Master Plan has the following overall objectives:

Use the Master Plan as a Guide in Making Decisions, Not as a Mandatory Course of Action

The Community Master Plan is a snapshot in time, a combination of perspectives developed by the dedicated people who participated in this process. There should be commitment to attain the visions presented in this document; however, it would be a mistake to adopt the plan as a "hold to this or else" document, restricting flexibility for future actions.

Implementation is the Responsibility of All Public, Private and Citizen Groups and Individuals, Not Just the City

The Community of Buckland contains of a variety of groups and individuals, including the City, the Buckland IRA, and the Northwest Arctic School District. Other organizations, such as the Northwest Arctic Borough, NANA Corporation, Maniilaq Association and state and federal agencies are also active in the Community. Implementation of this plan is the responsibility of all public, private and citizen groups and individuals, not just the City. It will take commitment, dedication of effort and funds, ownership, and pride to make this plan happen.

Range of Activities Where the Master Plan Can Be Used or Consulted When Making Decisions

The following list of activities is meant to be used as examples where the Community Master Plan can be applied or consulted when making decisions. Again the key to effective use is to regularly refer to the Master Plan as a guide and reference, rather than a mandatory document.

City of Buckland

- Utility Master Plans
- Capital project identification and scheduling
- Support of applications for state and federal grants
- Support of erosion and flood control projects
- Access and transportation plans
 - access routes and improvements
 - airport improvements
 - regional and statewide transportation plans
- Code modifications and revisions
 - zoning code
 - subdivision code
- Day to day zoning code decisions (conditional uses, variances, rezoning)

- Day to day conditions of subdivision approvals (replats, lot consolidation, variances, street vacations)

Buckland IRA

- Coordinate grant application and economic development activities with community needs
- Provide justification for funding requests from BIA and other sources

Northwest Arctic School District

- Capital facility programming
- Facility reuse/evening use
- Education program programming

Northwest Arctic Borough

- Implementing the Borough comprehensive plan, land management regulations, and Borough coastal management program.
- Setting capital and transportation improvement programs

NANA Corporation

- Providing economic development assistance
- Managing corporation lands, including ANCSA 14(c) 3 reconveyances

Maniilaq Association

- Establishing health and social services initiatives and priorities
- Providing economic development assistance

Specific Implementation Actions

Specific action items are in the chapter on Master Plan Goals and Objectives. Rather than repeat those specific action items here, refer to goals and objectives to understand the intent and direction of the action items.

COOPERATIVE PARTNERS

City of Buckland

The City is organized as a 2nd Class municipality under Alaska Statute 29 and was incorporated as a municipality in 1966. As a second class municipality, the City has the ability to tax and provide certain services, including water, sewer, and solid waste. The City levies a 2 percent sales tax. A seven member City Council elected by local residents governs the Community, and in turn the City Council selects the Mayor from one of it's elected members.

Buckland IRA Council

The Buckland Indian Reorganization Act (IRA) Council was formed in the 1940's, and was approved by the Secretary of Interior as the Native Village of Buckland in 1950. The IRA Council consists of seven elected members, with responsibility for village tribal enrollment;

jurisdiction over Native lands in the traditional area; provision of social and educational services under Public Law 93-638 contracts; supervision of the Buckland Store; and approval of business enterprise.

NANA Regional Corporation

The local Buckland Village Corporation merged with NANA Corporation, the regional Alaska Native Claims Settlement Act (ANCSA) for-profit corporation, in 1976. NANA owns both the surface and subsurface estate of ANCSA corporation lands in Buckland. The village of Buckland has two representatives that serve on the NANA Board of Directors. In addition to managing corporation lands and financial and business resources to benefit shareholders, the Corporation also provides economic assistance to shareholders. Through its partnership with Cominco Ltd. Operating the Red Dog Mine, NANA is one of the major employers of Buckland residents.

Northwest Arctic Borough

The Community of Buckland is located within the Northwest Arctic Borough and incorporated as a first class municipality in 1986, but adopted a home rule charter and reclassified as a second class Municipality in 1987. The Borough is responsible for education, planning and taxation; the Borough currently has no sales or property taxes, but works with companies to develop mutually beneficial payment in lieu of tax plans. In addition, the Borough has formed an Economic Development Commission, which also serves as an Area Regional Development Organization (ARDOR). It provides a range of services and assistance to communities like Buckland, including economic development, and applying for capital project and transportation funds. Buckland has a representative on the Borough Assembly and Planning Commission.

Northwest Arctic School District

The Northwest Arctic School District provides education services for all 11 villages in the region and operates the school in Buckland. The district seeks to prepare students with skills to succeed in the modern world, enhanced by a knowledge of the traditional Inupiat culture. The school serves 159 students from K through the 12th grade, and consists of three buildings, with a major building expansion project planned for 1999.

Maniilaq Association

Maniilaq Association is a regional non-profit Native organization that serves the health and social needs of Northwest Arctic Borough villages. It administers a wide variety of services and programs, including hospital and dental services, counseling, substance abuse treatment, emergency shelter, village government assistance, vocational training, economic development assistance, and housing assistance. Maniilaq assists with operation of the Buckland Health Clinic.

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16.0 FUNDING SOURCES**BUCKLAND GRANT ACTION PLAN**

| Program | Administrative Agency | Action | Restrictions | Contact | Amount | Deadline | Responsible Entity |
|---|---|--|--|---|--|---|-----------------------------|
| FEDERAL | | | | | | | |
| Governance and Social and Economic Development for Alaska Native Entities | Department of Health and Human Services, Administration for Children and Families, Administration of Native Americans (ANA) | Assist villages in developing land use capabilities and skills in the areas of land and natural resource management and protection, resource assessment and conducting environmental impact studies. | Current ANA SEDS grantees in Alaska whose project period ends on or before September 30, 1998 are eligible for a grant award under the current program announcement. ANA funds cannot be used for purchase of real property or construction. Grantee must provide at least 20% of the total approved cost of the project. ANA funds cannot be used for purchase of real property or construction. Work and costs must be a result of a declared event, located within the area designated by FEMA as eligible for assistance, and not eligible for assistance under another Federal program (permanent restoration work only). | Diann Winford (202) 401-7365 e-mail: Dwinford@acf.dhhs.gov | N/A | Applications must be submitted by May 1, 1998 | Traditional Village Council |
| Hazard Mitigation Grant Program | Federal Emergency Management Agency (FEMA) Alaska Division of Emergency Services (DES) | Funds for mitigation projects when a Presidential-declared disaster occurs. | | Jim Mackin (907) 428-7000 | Maximum amount is 15% of the cost of the disaster, of this amount FEMA would fund 75%, provided the state or local community contributes the additional 25% | N/A | State or local community |
| Emergency Watershed Protection Program | USDA, NRCS | Assists in relieving imminent hazards to life and property from floods and products of erosion due to natural disasters (technical and financial assistance). | There must be an unusual event, cannot be an ongoing problem. Funds may be used for erosion control but not relocation; intended only as a temporary solution. | Dwayne Coffey, NRCS State Conservationist (907) 271-6063 | \$8 million shared between 9 states | N/A | City of Buckland |
| Business & Industrial loans | USDA, Rural Development | Assist in obtaining quality loans for economic development. Funds must be used for business enterprise. | Project must be in a rural area or city of less than 50,000 population, borrower must obtain a loan commitment before borrower and lender jointly apply for a loan guarantee; one-time 2% loan guarantee fee. | Frank Muncy or Dean Stewart (907) 745-2176 | Alaska's allotment is \$1.5 million annually | N/A | Business Owner |
| Community Facility Loans | USDA, Rural Development | Loans for public entities in rural areas to construct, repair, improve or expand community facilities for health care, public safety and public services. | Applicants must be unable to obtain needed funds from other sources at reasonable rates and terms; have legal capacity to borrow and repay loans; be financially sound and able to manage the facility effectively. Available for communities with populations less than 10,000. Interest rates on loans vary. | Frank Muncy or Dean Stewart (907) 745-2176 | Alaska's allotment in FY97 was \$750,000 for direct loans and \$750,000 in loan guarantees. Grants up to 75% of development cost. Loans repayable over 40 years. | N/A | City of Buckland |

Final Buckland Community Master Plan – July 1999

| Program | Administrative Agency | Action | Restrictions | Contact | Amount | Deadline | Responsible Entity |
|--|--|---|--|---|---|---|---|
| FEDERAL (Cont.) | | | | | | | |
| Community Facility Loan Guarantees | USDA, Rural Development | Guaranteed loans for communities up to 50,000 population for community facilities essential for public safety, health care or public service. | Loan guarantee to enable other lenders to make loan fund available. Some restrictions on the use of funds. Guarantees up to 90%, but usually not exceed 80% | Frank Muncy or Dave Winter (907) 745-2176 | Alaska's annual allotment for FY 97 is \$750,000. | | |
| Intermediary Relending Program | USDA, Rural Development | Finance business and community development projects in rural areas through loans made to intermediaries that establish programs for the purpose of providing loans to ultimate recipients. | Intermediaries must be private non-profit corporations, public agencies, Indian groups, or cooperatives | Rural Economic and Community Development (907) 745-2176 | Intermediaries may receive up to \$2 million at 1% for 30 years. Intermediaries may then lend up to \$150,000 but not exceed 75% of a project, to individual borrowers. | N/A | Traditional Village Council or City of Buckland |
| Rural Business Enterprise Grants | USDA, Rural Development | Grants to public bodies, federal recognized Native and private non-profit corporations serving rural areas. Grants may be used for acquisition and development of land; construction, conversion, enlargement and repairs of buildings; to establish a revolving fund which can be used to provide financial assistance to third party recipients | Project must be located in a rural area or city of less than 50,000 population | Frank Muncy or Dean Stewart (907) 745-2176 | Application prioritized for funding, projects with highest priority are selected for funding. | N/A | Traditional Village Council or City of Buckland |
| Transportation Project Funding | USDOI, Bureau of Indian Affairs | Construction of new roads, upgrade of existing roads. | Applicant must be an IRA council and provide copy of resolution. | Marie Messing (907) 586-7182 | No set amount. Funding prioritized once every 5 years, reprioritization scheduled for summer 1998. | Applications submitted within first few months of 1998 can be considered in reprioritization. | Traditional Village Council |
| Indian Community Development Block Grant Program | HUD, Office of Native American Programs (ONAP) | Construction grants for housing, community facilities, and imminent threat to health and safety | Applicants must be any Indian tribe, band, group, or nation, including Alaska Indians, and any Alaska Native village considered eligible under Title I of the Indian Self-determination and Education Assistance Act | Donna Hartley (907) 271-4673 or 271-4628 | Alaska 1997 appropriation level is \$5.53 million Up to \$500,000 per application | Availability of funds announced in April with application deadline of July 23 | Traditional Village Council |
| Indian HOME Program | HUD/ONAP, Housing and Community Development Division | Funds are awarded competitively to Federally-recognized Indian tribes and Alaskan Native villages. These governments in turn make loans or grants for the rehabilitation, acquisition, or new construction of both owner-occupied and rental housing. | All households assisted with HOME funds must have incomes that do not exceed 80% of median income for the area as published by HUD | Cheryl Benson (907) 271-4628 | Alaska general appropriation levels of \$500,000 | Unknown at this time | Traditional Village Council |

Final Buckland Community Master Plan – July 1999

| Program | Administrative Agency | Action | Restrictions | Contact | Amount | Deadline | Responsible Entity |
|--|--|---|---|--|--|---|---|
| FEDERAL (Cont.) | | | | | | | |
| Comprehensive Improvement Assistance Program | HUD, ONAP | Improve the physical condition of existing Mutual Help and Indian Rental Housing | Assistance to Indian Housing Authorities with less than 250 housing units. Applications must be developed in consultation with Tribal Governments and local residents. | AVCP | | Apply pursuant to an annual NOFA published in the Federal Register | |
| STATE | | | | | | | |
| Rural Development Assistance Program | Alaska Department of Community and Regional Affairs (DCRA), Municipal and Regional Assistance Div. | Projects that contribute to the economic development of the community and/or develop basic community facilities or infrastructure | Native village councils and regional or local non-profit corporations serving communities with population of less than 900. Amount subject to legislative funding. Funding for FY 97 gutted and funding for FY 98 is questionable. | Sheila Dyer (907) 465-4817 | Up to \$50,000 per community | Program announcement in Sept. 1997 with applications due January 1998 | City and/or Traditional Village Council |
| Community Development Block Grant | DCRA, Municipal and Regional Assistance Div. | Community development projects | Community must be incorporated and meet federal low-to-moderate income levels (51% of persons who benefit from a funded project) | Jo Cooper (907) 452-4468 | Up to \$200,000 per community | December or January | City of Buckland |
| Rural Electrification Revolving Loan Fund | DCRA, Division of Energy | Provides loans to local communities for extending electrical service into previously unserved areas. | Loans are made only to electrical utilities holding an Alaska Public Utilities Commission Certificate of Public Convenience and Necessity. Borrowers must demonstrate that the loan is likely to be repaid in ten years from the date electrical service is provided to the new customers. | Terri Bramlett, Loan Specialist (907) 269-4628 | Max loan amount \$500,000 or \$250,000 is cash available in the fund is less than \$3 million at time of application. Interest is fixed at 2%. | N/A | AVEC |
| Electrical Service Extension Fund | DCRA, Division of Energy | Matching grant program providing up to 60% of the cost of site preparation and construction for extending electrical service to private residences not currently served by an electrical utility, and as a second priority, for making improvements to existing utilities | | Eric Marchegiani (907) 269-4684 | | | |
| Capital Project Matching Grants – Municipalities | Alaska Department of Administration, Div. of Administrative Services | Lump-sum appropriations made by the Legislature to the Municipal Capital Project Matching Grant Fund. Allocations based on population are made to individual grant accounts created for eligible municipalities. | Capital project exceeding \$10,000 to acquire or improve an asset with an anticipated life exceeding one year incl.; land acquisition, construction, repair or structural improvement of a facility, engineering and design for a facility and acquisition or repair of equipment. An incorporated municipality is eligible to apply if incorporated on or before July 1 of the previous fiscal year, or if it received state municipal assistance during the previous fiscal year. | Lena Simmons (907) 465-5647 | Up to \$25,000 | January | City of Buckland |

Final Buckland Community Master Plan – July 1999

| Program | Administrative Agency | Action | Restrictions | Contact | Amount | Deadline | Responsible Entity |
|---|--|---|---|--------------------------------|--------|----------|--------------------|
| STATE (Cont.) | | | | | | | |
| Transportation Projects | Alaska Department of Transportation & Public Facilities (DOT&PF) | | | | | | |
| NON-PROFIT | | | | | | | |
| | Alaska Village Electric Cooperative | | | Marie Becker (907) 561-7972 | | | |
| Public and Indian Housing Modernization Funding | Tanana Chiefs Conference Regional Housing Authority | Water and wastewater projects associated with existing housing development | Only available to Alaska Regional Housing Authorities | (907) 543-3121 | | | |
| COMMERCIAL | | | | | | | |
| Loans | National Cooperative Bank | Provides financing and full range of banking services to cooperatives and ANCSA corporations and tribes | | Al Williams (907) 561-0007 | | | |

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APPENDIX A: Town Meeting Results August 6, 1998

Buckland's New Village Priorities (Listed in Order)
As Developed at a Town Meeting on
August 6, 1998

1. New Clinic
2. Fire Station
3. More Housing
4. New Bridge
5. More Jobs (Education, Training, Licensing, Certification)
6. Play Ground
7. Bigger Laundromat
8. Day Care Center
9. Low Rent Apartments
10. Teen Center

Buckland's Current Issues (1996 List)
Status Update – Town Meeting
August 6, 1998

1. **Truck Haul System** - Everyone understood this goal as being met. The village *now* has two haul trucks operating; one for water delivery and one for hauling away sewer.
2. **Road to Gravel Source** – Buckland's road system is covered with red gravel from the new site. From the air Buckland looked like Indian Country! Although this goal has been met it was mentioned throughout the meeting that Buckland needs more roads.
3. **Electric Upgrade** – Even though this goal has been met it was stated that Buckland still needs a bigger generator for future needs such as street lights.
4. **New School** – Buckland received notice that funds were awarded for construction of a new school. They were excited. The village participants said the new school is lacking a playground for their children. The need for a playground is an issue that continues to be raised over time.
5. **Food Processing and Crafts Facility** – Nothing to report. No work done on this.
6. **Erosion Control** – The appropriate local, regional, and federal and state agencies have been noticed about Buckland's erosion problem. However, no real planning work has been done. An application for funding has not been developed.
7. **Bridge Across Buckland River** - The planning for this continues to be on-going. This issue made it to today's new top 10 items developed by village participants. The Buckland people still like to be able to have a bridge access to the hill on the other side of the river where their cemetery is located. The hill can also be used for future townsite expansion.
8. **Airport Extension** Although this goal has been met with the widening of the airport almost completed. Buckland felt that it also needed a cross wind runway bank.
9. **Tourism** - Efforts have been unproductive. This goal has not been met.
10. **Youth Function Added to Food Processing and Crafts Facility** - This item is attached to the unmet goal of #5.

**Updated "Needs List" For Buckland as Established at a Town Meeting
August 6, 1998**

52 Items Identified - Randomly Listed Below

| | |
|---|----------------------------------|
| Food Processing & Crafts Facility | Play Ground |
| Erosion Control | Teacher Housing |
| Bridge Across River | Add Cross Wind Runway |
| Tourism | Cab Service |
| Youth Functions In Food Processing & Crafts Facility | Relocate Runway |
| Bigger Electric Generator | Transportation for CHPs/Patients |
| Need Bridge | More Jobs |
| More Land For Expansion | Heavy Equipment |
| More Road Systems | Library |
| Consolidate Tank Farms | Public Road Signs & Speed Limits |
| Street Lights | Head Start Program & Facility |
| Recreational Center | Native Products Building |
| Teen Center | New IRA Building |
| Day Care Center | New City Building |
| VPO's - more of them | |
| Senior Center | |
| Bigger Clinic | |
| New Clinic | |
| Bigger Laundromat | |
| New Electric Meter for Homes | |
| More Housing | |
| Better Sewer System | |
| Electrical Upgrade | |
| Flood Control - Dike & Gravel | |
| Extended Roads to Outgoing Areas | |
| More Homemakers for Elders | |
| Transportation for Elders | |
| Fire Station | |
| Fire Fighting Equipment | |
| Snow Machines for Search & Rescue | |
| Cook House | |
| Multi-Purpose Building | |
| Low Rent Apartments | |
| New Dump Site | |
| Bigger Post Office | |
| New Store | |

Don't (I think "Tail House")

**List of Buckland's Strengths, Weaknesses, Problems, & Opportunities
As Identified by Village Participants at a Town Meeting on
August 6, 1998**

STRENGTHS

Unity
Discipline
Elders Help A lot
We Help Elders
Everyone Helps Each Other
Church
Dry Community
Basketball Chanups -- Boys
Eskimo Olympics

Subsistence Activites
Good Search & Rescue
Gravel Source
Concerned City Workers
Little Bit of Everything -- Subsistence
Beautiful Country
Good Hospitality -- Friendly
Strict Curfew Law

WEAKNESSES

Need More Grants
Need a Grantwriter
Need More Funds for College
 Scholarships & Training
Lack of Family Planning
Need a Play Ground
Lack Recreational Activities
Need More Roads
Need Better Access for Elders
 Into Buildings
Need Transportation for CHPs
 And Patients
Need More Fee Agents
Need More Services for Elders
Need Street Lights

Need Inupiaq Teachers
Have Language Barrier
Need Suicide Prevention
Need More Cable TV Channels
Need More Housing
Too Much Over Crowding of Families
Need More Involvement in Community Meetings
Lack of Day Care
Need Better Enforcement of Alcohol/Drugs
Need Full-Time Counselor (social & mental)
Need More On-Call Health Aides (for back-up)
Need Teen Center
Need More Heavy Equipment
Need More VPOs

PROBLEMS (THREATS)

Drugs/Alcohol
Speeding
Wild Animals Too Close to Village
Flooding
Erosion
Dump Too Close to Village

Better Automated Weather System
Too Much Traffic -- Need More Roads
Sewer System -- Need to be Better
Crowded School
Laundromat is Too Small
Raw Sewage In Town

OPPORTUNITIES

Trade with Cultural Museum Artifacts
Roads
Low Rent Apartments
Improving Education
Local Hunting & Fishing Guides
More Meeting Room Space

Tourism Projects
Availability of Day Care
Food Processing Building
Establishing Sewing Circle to Teach Others
Centrally Located Offices
Good Health Clinic

**Attendance List
Buckland's Town Meeting
August 6, 1998**

**75 Village Elders, Adults, Teenagers and Young School Children
Actively Participated in Town Meeting**

Clara Parrish
Amy Barger
Nelson P. Lee, Sr.
Mabel Thomas
Chester Ballot, Sr.
Annie Ballot
Stephen Ballot
Raymond Lee, Jr.
Patricia A. Thomas
Josephine Thomas
Glenn Thomas, Sr.
Maria Thomas
Nancy Downey
Viola Bailot
Lawrence Thomas
Travis Armstrong
Beulah Lee
Louis Carter
Lila Barger
Marcaline Lee
Rosaline Hadley
George M.
Louis Hadley, Jr.
Matthew Hadley
Betsy Thomas

Nita Tomas
Emma Hadley
Phillip Geary
Darlene Hadley
Norma Hadley
Glenna Parrish
Arlene Armstrong
Willie P. Thomas
Samson Parrish
Delbert Thomas, Sr.
Bertha Thomas
Warren Thomas
John Geary
Susie Ballot
Jennifer Kirk
Trasi Armstrong
Sophia Hadley
Diana Carter
Tony Hadley
David Barr
Nathan D. Hadley
Evans Thomas
Avis Hadley
Marvin Barger
George M.

Minnie Stalker
Wilma Thomas
Chelsie Thomas
Peggy Otton
Jennifer Savok
Nora Hadley
Irene Armstrong
Jesse Ahkpuk, Sr.
Roberta Thomas
Eugene Priscot
Samual Ballot
Michelle Downey
Susie Lee
Tillie Thomas
Dorcas Swan
Hannah Armstrong
Amelia Hadley
Bessie Lee
Inez Koenig
Daniel C. Kirk
Richard Thomas
Fred Armstrong
Katherine Hadley
Daniel Silook
M. Armstrong

Buckland Priority Needs List1.txt

Buckland Priority Needs List

1998

#1 Priority

Needs

Goals

Action Needed

Agency/Program

Time Frame

Approximate Cost

New Clinic

To have facility to adequately function for Health local needs

1. Construct New Building

Maniilaq Association

3-5 years

Realistically costs

\$900,000

2. Order materials for fall construction

City of Buckland

3. Current Clinic Renovation

Northwest Arctic Borough

Indian Health Service (IHS)

Page 1

Buckland Priority Needs List

1998

#2 Priority

Needs

Goals

Action Needed

Agency/Program

Time Frame

Approximate Cost

Fire Station

To have a facility constructed to protect all homes from fire.

1. Determine facility costs

IRA

City Council

1-3 years

?

Educate fire prevention

Issues

2. Conduct study to determine costs/design

NAB

State of Alaska

Page 2

Buckland Priority Needs List

1998

#3 Priority

Buckland Priority Needs List1.txt

Needs

Goals

Action Needed

Agency/Program

Time Frame

Approximate Cost

More Housing

All single families in their own homes

1. More money for 20 more homes

IRA

By 2003

\$70,000 per house x 20 homes

2. Subdivision information

NANA

Housing Authority

Page 3

Buckland Priority Needs List

1998

#4 Priority

Needs

Goals

Action Needed

Agency/Program

Time Frame

Approximate Cost

New Bridge

Have bridge connecting land and opening

1. Continue Draft Plan

DOT State

COE

By 2001

Study

\$25,000 - 75,000

Opportunities for expansion of community

2. Continue Draft Plan

City

Actual costs unknown

3. Planning

Northwest Arctic Borough

NANA

Page 4

Buckland Priority Needs List

1998

#5 Priority

Needs

Goals

Action Needed

Buckland Priority Needs List1.txt

Agency/Program

Time Frame

Approximate Cost

More jobs

All local people working
trained and educated

1. Need to educate people
IRA

On going

2. Need to provide more training
City

3. Need High School Diploma/GED
Maniilaq Association

4. Need to encourage kids to stay in school
Alaska Technical Center

5. Need drivers license
School District

6. Need local training center

Page 5

Buckland Priority Needs List

1998

#6 Priority

Needs

Goals

Action Needed

Agency/Program

Time Frame

Approximate Cost

Playground

Places for children to play (safe place)

1. Develop plan for playground at new school site and other side of town
City

1-2 years

\$10,000 for both

School District

Page 6

Buckland Priority Needs List

1998

#7 Priority

Buckland Priority Needs List1.txt

Needs

Goals

Action Needed

Agency/Program

Time Frame

Approximate Cost

Bigger Laundromat

Adequate facility for everyone to use

1. New building house 10 washers/dryers
City

1-2 years

3 million

Need 10 washers (triple wash) and 10 dryers

Public Health

Currently 3 dryers and 4 washers (not enough)

Page 7

Buckland Priority Needs List

1998

#8 Priority

Needs

Goals

Action Needed

Agency/Program

Time Frame

Approximate Cost

Day Care Center

Provide day care for parents. Both after school and all day with age appropriate rooms.

1. Draft design of day care
Maniilaq Manpower

1-2 years

\$500,000

2. Construct day care
Buckland IRA

Page 8

Buckland Priority Needs List

1998

#9 Priority

Buckland Priority Needs List1.txt

Needs
Goals
Action Needed
Agency/Program
Time Frame
Approximate Cost
Low rent apartments
Low income families live in affordable housing
1. Draft/design 20 apartments
Buckland IRA
5-6 years
Unknown

Page 9
Buckland Priority Needs List
1998
#10 Priority

Needs
Goals
Action Needed
Agency/Program
Time Frame
Approximate Cost
Teen Center
Recreational activities for local teens
1. Design Teen Center
City
1-3 years
\$500,000

Safe activities for students
2. Construct Teen Center
IRA

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APPENDIX B: Community Involvement Results

October 29 & 39, 1998

Linda Joule & Selma Moose
Co-facilitators
Northwest Arctic Borough
Box 1110
Kotzebue, Alaska 99752

Community Involvement Results

Buckland, Alaska



Value's & Guidelines: in conjunction with the

U.S. ARMY CORP OF ENGINEERS
DEMONSTRATION PROJECT

ESTABLISHED PLANNING VALUES & GUIDELINES:
October 29, 1998 Buckland School Gymnasium

Pre-meeting Design:

- All community leaders need to be working and supporting each other.
- Hold meetings when the majority of the people are "home".
- Arrange for door prizes that the participants have a chance to win.
- Set the agenda and stick to it.
- Arrange for snacks and beverages to the extent possible.
- Post meeting notice in advance and announce the meeting notice on CB.

Actual Meeting:

- Start on time.
- Open meetings with a prayer or a moment of silence.
- Conduct meetings with respect.
- Establish a quorum if needed for decision-making on plans.
- Extend thanks to all participants who attend the meeting.
- Close the meetings with a prayer.

Participants Code of Conduct during the meetings:

Be on time

Show respect for one another

Respect everyone's opinion

No criticizing or blaming

Be cooperative

No back-tracking when a decision is made - move forward

No alcohol, snuff or drugs allowed.

ON CHILDREN BEHAVIOR:

- Parents are to be responsible and in control of children during these meetings.
- Discipline and remind the children to quieten down and remain seated.

Good Communication Tools to use:

- Listen to the speaker
- Do not interrupt the person speaking
- Ask questions if you are not sure
- Tell the truth, be honest and keep no secrets
- Do not be afraid to speak out
- Be positive and open to new ideas

BUCKLAND COMMUNITY VALUES : The Buckland traditional Inupiat subsistence cultural lifestyle is preferred overall. The teachings of the Elders about the historical aspects of early hunting practices and respect for the land, the animal habitat resources and the importance of the seasonal activities is to be held on to. Any type of development should keep in mind the people's need to have ready access to seasonal cycles of hunting and gathering and storing of local foods.

COMMUNITY DEVELOPMENT PRINCIPLES TO PRACTICE:

TRUST: Building and maintaining trust is an important key in working with the local people. Trust goes a long way.

AWARENESS: The community must be educated about new ideas and projects coming down the line so that they have a chance to get involved.

UNDERSTAND LOCAL VALUES: Look and work with the local community, each community has their own history, strengths, and weaknesses. *This impacts behavior/attitude.*

RECOGNIZE EXISTING GROUPS: Know how to work with all groups. They all have a stake in the community process of change.

CHANGE: Recognize that change threatens status quo.

HELP FAVORABLE CHANGE TO OCCUR. Help people to express their concerns safely and without reprisal. Be Creative and open to new ideas.

How to work with other groups: (defined by participants)

Keep each other informed. Recognize the leadership involved. Use public notices for public involvement. Remember that we work for the community. Support each others goals. Discuss issues and plans together. Hold joint meetings. Keep friends informed on all activities. Invite others to get involved and help each other out. Think **SAFETY** first in planning for the community.

HOW TO DEVELOP TRUST: (defined by participants)

Communicate with each other. Get to know each other and persons working. Provide moral support. Show mutual respect. Understand differences and similarities. Have confidence in self and in others. Take risks-go beyond your comfort zone. Have patience & be cooperative. Use humor. Be responsible and follow through with commitments.

ESTABLISHED COMMUNITY BASED VALUES: (defined by participants)
In Buckland, the people value:

THE COMMUNITY:

- Community gatherings
- Supporting local government and leaders
- Hold respect for Elders and value them
- Unity
- Value the land
- Value the Buckland River
- Clean environment
- Community growth
- Community safety
- Sanitation
- Cleanliness
- It takes a community to raise a child.

INDIVIDUAL BASED VALUES:

- To be drug free and sober.
- No fighting, stealing, and to always show respect for other peoples belongings.
- To know and teach right from wrong.
- To share food.
- To value self-improvement.
- To show respect for others.
- To share your talent.
- To be all you can be, and more.
- To have pride in what you do.
- To support each other.
- To value Christianity religion.

CHILDREN & EDUCATION:

- It takes a community to raise a child.
- Leaders share knowledge with youngsters.
- Keep healthy homes by teaching children right from wrong.
- Encourage students to seek higher education.
- To support the teachers and the aides in the school.
- We value our children and their education.

ECONOMIC VALUES:

- Community Projects-local hire
- State fire fighters
- Promote/seek Economic Development opportunities

**Buckland Community Meeting
October 30, 1998**

What we want to see in our house:

Kitchen:

- Hot and cold water "faucet"
- Dishwasher-electric
- Smoke detectors
- Fire extinguishers
- Furnace in the basement/recreation area
- New propane or electric stove with built in microwave
- Refrigerator
- Big kitchen space
- Nice counters/preparation counter
- Bigger shelves
- New sinks
- Good lighting

Bathroom:

- Bath tubs with shower stall
- Flush toilet
- Good lighting
- Bathroom scale
- Full length mirror
- Wall fan - air conditioner
- Big bathroom space
- Jacuzzi/sauna
- Closet space
- Bathroom sink with bottom shelves
- Hanging racks

Rooms:

- Walk in closets in each bedroom with doors
- Good lights and reading lamps
- Carpets
- Good locks
- Nice paneling
- Good size rooms
- Night stands

Living room:

- Wall to wall carpet
- Big spacious room to fit couches, coffee table, entertainment center
- Better paneling

- Good lighting
- Bigger shed for out jackets, shoes and boots.

Laundry Room:

- Washer and dryer
- Ironing board
- Dirty clothes bin
- Shelves for soaps, Clorox, dryer sheets
- Laundry sink

What we want to see in our neighborhood:

- Dog pen
- Street lights/street signs written in both English and Inupiaq
- Drive ways
- Erosion control for the river
- Roads – paved or gravel
- Trash bin
- Play ground
- Street road away from homes lot

What we would like to see outside our houses:

- New clothes line
- Storage house/van/garage
- Green house/garden
- No more honey bucket containers
- Better trash bins
- Fence
- Dog barn
- Clean and safe yard
- More property space/kids play area
- Big Smoke house/meat-fish drying rack
- No wires, pipes, etc....to trip on
- More outside outlets/plug-ins
- Cigarette ash trays containers
- Road away from home
- Rain drains

What we would like to see in our community:

- Land fill area
- Dog pound
- Storage for the store
- Community Rental Freezer
- Paved roads
- Taxi-cab service

- Big road removed from the river
- Community-use boat trailer
- Boat storage area
- New clinic (health)
- Recreation Center
- Teen Center
- Bingo hall
- New church
- Bigger light plant
- More fuel tanks/computerized tank farm
- More street lights
- Fire hall
- Fuel delivery truck
- Bigger lots for homes
- More roads
- Bridge across the river
- Pipes under the road (culverts)
- Bigger play ground
- Picnic area/park
- Daycare center – Headstart
- Better erosion control methods
- Bigger post office
- Multi-purpose building
- Bigger Laundromat
- Roller blade rink
- Healthy people
- Underground water well
- Hydro electric power
- Reindeer industry area

Group Two:

What I would like to see in my house:

- Water sprinklers in each room
- Water and sewer
- Washer and dryer/dishwasher
- Fire extinguishers
- Front door and back doors with sheds
- Fire escapes
- Computers with internet
- Alternate heat/wood stove

Outside your house:

- Gravel or grass

- Street lights
- Power lines
- Access to roads
- Fish racks/meat racks or clothes lines
- Storage shed
- Underground water lines

Your Neighborhood area:

- Erosion control on riverside
- Cleaner yards
- Trash bins
- Environmentally safe yards

Your Community:

- Expansion of cemetery
- Bridge to the cemetery
- Playground/recreation center
- Bigger post office/new post office
- Bigger clinic
- Underground sewer
- River port dock
- Landing dock for the barge
- New city/IRA office
- New washeteria: more washers/dryers
- New road to cemetery
- Head start & day care
- Maintenance shop
- Land fill
- Clean river bank
- Tank farm
- New land fill
- Apartments/ senior citizens center
- Transportation for senior citizens: bus or vehicles
- Jail house
- Fire hall
- Terminal for airport with telephone
- Beacon on Clem mountain

Group three:

What we want to see in our houses:

- More rooms
- Bigger kitchen & bathrooms & showers
- Running water

- Washer & dryer area
- Electrical upgrading system/plug ins & switches
- Access to electrical wiring
- Sheet rock/fire resistance walls
- Storage rooms
- Built in stoves, both oil and wood
- Dish washer

Outside the house:

- Better street lights/more lights
- Porch lights (flood lights)
- Yield signs
- Road maintenance improvements
- Play ground/swimming pools
- Clean yards/ incinerators
- Fences for personal property
- Garages
- Gardens/flowers
- Underground water & sewer
- Fish racks/meat racks
- More fire escapes
- Better trash bins
- No littering

Neighborhood:

- Friendly neighbors
- No loose pets
- Teen center
- Elder transportation/mini-van
- Drug and alcohol free
- No fighting

Community:

- Elder transportation/ minivan
- School bus
- Parking lot by schools, with meters
- Handicap area
- More roads
- Bridges to across the river
- More houses/apartments/hotel
- Recreation center
- Restaurant
- Street lights
- Fire house/engines
- Child care center

- **Movie theatre**
- **Play ground**
- **Outside basketball court**
- **Gas stove oil delivery truck**
- **Better patrol service**
- **Erosion control by the river banks**
- **Walking bridge by the lake**
- **Flood control**

APPENDIX C: Buckland Community Survey Results



BUCKLAND COMMUNITY SURVEY RESULTS

GENERAL:

| | |
|--|----------|
| Total number of houses in community | 84 |
| Number of houses surveyed | 63 |
| Percentage of houses surveyed in community | 79% |
| Average occupants per house summer | 4.98 |
| Average occupants per house winter | 4.72 |
| Average age of house | 18 years |

WATER SOURCE:

| Question | YES | NO |
|---|------|-----|
| Is water taste adequate? | 77% | 23% |
| Is water color adequate? | 82% | 18% |
| Do you believe the water is safe? | 77% | 23% |
| Is a community fire protection/hydrant important? | 100% | 0% |

SEWER SYSTEM:

| Question | YES | NO |
|---|-----|-----|
| Is honey bucket station maintained? | 66% | 33% |
| Are odors from the sewage lagoon by the washeteria a problem? | 51% | 49% |

SOLID WASTE:

| | |
|-------------------------------------|---------|
| Average garbage bags per week | 4.8 |
| Average cost per household per week | \$10.00 |

UTILITIES:

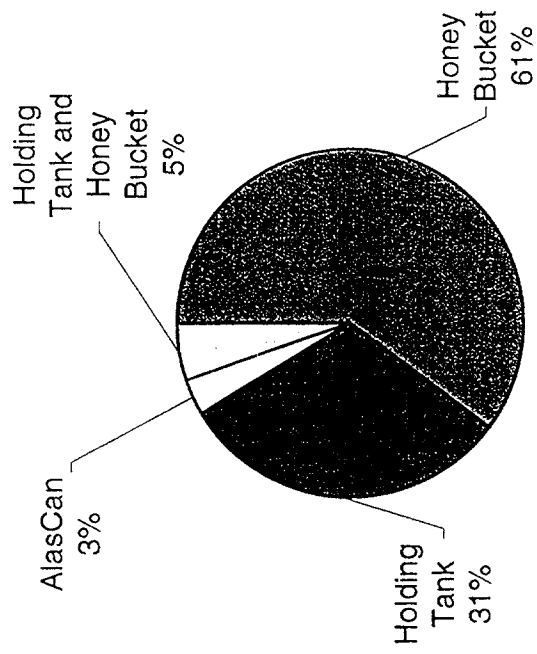
| | |
|---------------------------------|----------|
| Homes with honey bucket systems | |
| Average electric cost per month | \$130.27 |
| Average fuel cost per month | \$242.20 |
| Average water cost per month | \$14.27 |
| Average sewage cost per month | \$10.00 |

| | |
|----------------------------------|----------|
| Homes with holding tanks systems | |
| Average electric cost per month | \$199.57 |
| Average fuel cost per month | \$279.20 |
| Average water cost per month | \$55.15 |
| Average sewage cost per month | \$51.50 |

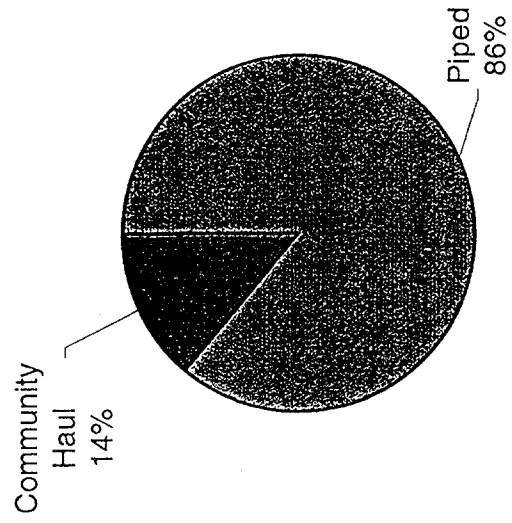
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|---------------------------------|----------|
| Homes with AlasCan systems | |
| Average electric cost per month | \$257.50 |
| Average fuel cost per month | \$300.00 |
| Average water cost per month | \$0.00 |
| Average sewage cost per month | \$50.00 |

SEWER SYSTEM

Existing Sewer Systems

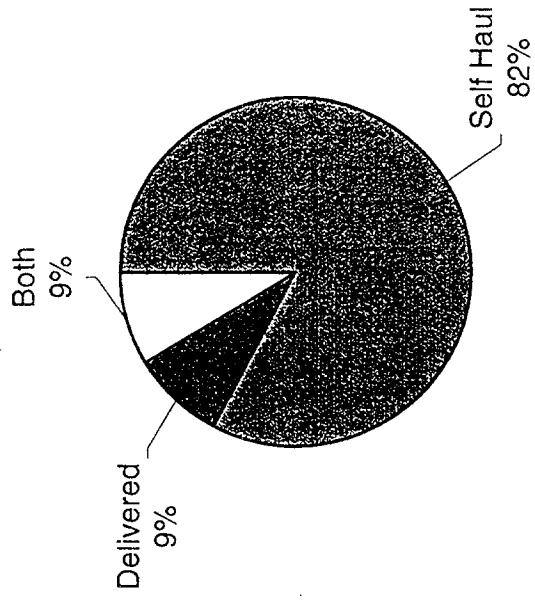


Preferred Sewer System



WATER SYSTEM

Existing Water Source Systems



Preferred Water Source System

